



## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

FREEDOM OF INFORMATION ACT PROGRAM

November 12, 2019

In reply refer to: FOIA #BPA-2019-00412-F

Nathan Sandvig  
205 SE Spokane Street, Suite 300  
Portland, OR 97202  
Email: [nathan.sandvig@nationalgrid.com](mailto:nathan.sandvig@nationalgrid.com)

Dear Mr. Sandvig,

This communication is the Bonneville Power Administration's (BPA) final response to your request for agency records made under the Freedom of Information Act, 5 U.S.C. § 552 (FOIA). Your request was received on January 31, 2019 with an acknowledgement letter sent to you on February 12, 2019.

### **Request**

“1. Third AC Capacity Ownership Agreement between the Bonneville Power Administration and Snohomish County Public Utility District and any amendments;

2. Third AC Capacity Ownership Agreement between the Bonneville Power Administration and Puget Sound Energy and any amendments;

3. Third AC Capacity Ownership Agreement between the Bonneville Power Administration and PacifiCorp and any amendments;

4. Third AC Capacity Ownership Agreement between the Bonneville Power Administration and Seattle City Light and any amendments;

5. Third AC Capacity Ownership Agreement between the Bonneville Power Administration and Tacoma City Light and any amendments;

6. Third AC Capacity Ownership Agreement between the Bonneville Power Administration and Pacific Northwest Generating Cooperative, any amendments, and any assignment agreement to the Turlock Irrigation District or revised agreement incorporating such assignment;

7. Third AC Intertie Construction Agreements and agreements regarding commercial transmission rights for such facilities between the Bonneville Power Administration and PacifiCorp;

8. A copy of the Record of Decision for the Capacity Ownership Contracts for Non-Federal Participation in the Third AC Intertie.”

### **Clarification**

On February 12, 2019, via letter to the agency, you clarified your original request as follows:

“For the first six documents referencing the Capacity Ownership Agreements, we are requesting all amendments to the agreements but only the recent (past 12 months) revisions to provisions of the agreements that update numbers in the agreements.

For the documents in the seventh request (Third AC Intertie Construction Agreements and agreements regarding commercial transmission rights for such facilities between the Bonneville Power Administration and PacifiCorp), we are requesting all amendments or revisions.

For the eight item requested, we did not find the document at the web link sent and have been unable to find the document on the BPA website. We have found the March 1994 Record of Decision on Non-Federal Ownership. In the March 1994 ROD, BPA stated on page 21 that the final contract terms of the Capacity Ownership Contracts would [be] addressed in a separate Record of Decision. It is that Record of Decision that we have been unable to find on the BPA website.”

### **Response**

BPA conducted a search of electronic records in the agency’s Customer Contracts Administration office. That office located 3074 pages of records responsive to your request. Of that total 3074 pages, BPA is withholding 63 pages under 5 U.S.C. § 552(b)(4) (Exemption 4). The total number of pages accompanying this communication is 3011. An explanation of exemptions applied follows.

### **Explanation of Exemptions**

The FOIA generally requires the release of all government records upon request. However, the FOIA permits or requires withholding certain limited information that falls under one or more of nine statutory exemptions (5 U.S.C. §§ 552(b)(1-9)).

#### Exemption 4

In compliance with the FOIA, BPA provided Shell Energy with an opportunity to object to a public release of their third party information contained in the responsive agency records. That objection opportunity is provided for by Exemption 4 and DOE and BPA FOIA regulations and processes. Exemption 4 protects third party confidential commercial or financial information from public release. Shell Energy submitted their written objections. BPA evaluated those objections and the records objected to. Based on the objections received from Shell Energy, and the content of the records objected to, and U.S. Department of Justice guidance on the proper application of Exemption 4 to those records, BPA has accepted Shell Energy’s objections to the public release of their confidential information contained in the responsive agency records. U.S. Department of Justice information on the application of Exemption 4 can be found at the following web links:

<https://www.justice.gov/oip/blog/new-guidance-issued-exemption-4-foia>

<https://www.justice.gov/oip/exemption-4-after-supreme-courts-ruling-food-marketing-institute-v-argus-leader-media>

<https://www.justice.gov/oip/step-step-guide-determining-if-commercial-or-financial-information-obtained-person-confidential>

### **Related FOIA Responses**

Please note, the agency office performing the search for records for part 7 (above) of this request also performed the records search for your request BPA-2019-00410-F. Records responsive to BPA-2019-00412-F are also responsive to BPA-2019-00410-F. Therefore, for ease of review and processing, records responsive to part 7 of this request will be released with the agency's response to BPA-2019-00410-F—and *not* duplicated in this BPA-2019-00412-F response.

### **Fees**

There are no fees associated with the response to your request.

### **Certification**

Pursuant to 10 C.F.R. § 1004.7(b)(2), I am the individual responsible for the search, determination, and records release described above. Your FOIA request BPA-2019-00412-F is now closed with all available agency records provided.

### **Appeal**

The adequacy of the search may be appealed within 90 calendar days from your receipt of this letter pursuant to 10 C.F.R. § 1004.8. Appeals should be addressed to:

Director, Office of Hearings and Appeals  
HG-1, L'Enfant Plaza  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585-1615

The written appeal, including the envelope, must clearly indicate that a FOIA appeal is being made. You may also submit your appeal by e-mail to [OHA.filings@hq.doe.gov](mailto:OHA.filings@hq.doe.gov), including the phrase "Freedom of Information Appeal" in the subject line. (The Office of Hearings and Appeals prefers to receive appeals by email.) The appeal must contain all the elements required by 10 C.F.R. § 1004.8, including a copy of the determination letter. Thereafter, judicial review will be available to you in the Federal District Court either (1) in the district where you reside, (2) where you have your principal place of business, (3) where DOE's records are situated, or (4) in the District of Columbia.

You may contact BPA's FOIA Public Liaison, Jason Taylor, at 503.230.3537, [jetaylor@bpa.gov](mailto:jetaylor@bpa.gov), or the address on this letter header for any further assistance and to discuss any aspect of your request. Additionally, you may contact the Office of Government Information Services (OGIS)

at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows:

Office of Government Information Services  
National Archives and Records Administration  
8601 Adelphi Road-OGIS  
College Park, Maryland 20740-6001  
E-mail: [ogis@nara.gov](mailto:ogis@nara.gov)  
Phone: 202-741-5770  
Toll-free: 1-877-684-6448  
Fax: 202-741-5769

Thank you for your interest in the Bonneville Power Administration.

Sincerely,

A handwritten signature in black ink, appearing to read "Candice D. Palen". The signature is fluid and cursive, with the first name being the most prominent.

Candice D. Palen  
Freedom of Information/Privacy Act Officer

Enclosure: responsive agency records

AMENDATORY AGREEMENT  
to the  
PACIFIC NORTHWEST AC INTERTIE  
CAPACITY OWNERSHIP AGREEMENT  
executed by the  
UNITED STATES OF AMERICA  
DEPARTMENT OF ENERGY  
acting by and through the  
BONNEVILLE POWER ADMINISTRATION  
and  
PUGET SOUND POWER & LIGHT COMPANY

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Section	Page
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2. Amendment of Agreement .....	2

This AMENDATORY AGREEMENT is executed as of Dec 20 1996, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville) and PUGET SOUND POWER & LIGHT COMPANY (Puget), a corporation of the State of Washington.

WI TN ES SETH:

WHEREAS the Parties on October 11, 1994, entered into the Pacific Northwest (**PNW**) AC **Intertie** Capacity Ownership Agreement, Contract No. **DE-MS79-94BP94521** (Agreement); and

WHEREAS the Federal Energy Regulatory Commission (**FERC**) has issued Order No. 888, "Promoting Wholesale Competition Through Open Access **Non-Discriminatory** Transmission Service by Public Utilities; Recovery of Stranded Costs By Public Utilities And Transmitting Utilities"; and

WHEREAS the Parties desire to amend the Agreement so as to comply with such Order No. 888,

NOW, THEREFORE, the Parties agree as follows:

1. **DEFINITIONS**

Capitalized terms used in this **Amendatory** Agreement, unless otherwise defined herein, have the respective meanings set forth for such terms in the **Agreement**.

2. **AMENDMENT OF AGREEMENT**

Subsection 3(b) of the Agreement is deleted in its entirety and the following is inserted in lieu thereof

**(b) Right to Wheel for Third Parties**

Puget may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by **Puget**. Puget shall have no obligation under this Agreement to make available to Bonneville any portion of **Puget's** Scheduling Share which is unused in any hour, and Bonneville **shall** not schedule over **Puget's** Scheduling Share without **Puget's** prior written consent.

Bonneville shall treat all scheduling information consistent with the standards of conduct contained in Part 37 of **FERC's** regulations.

IN WITNESS WHEREOF, the Parties hereto have executed this **Amendatory** Agreement.

PUGET SOUND POWER & LIGHT  
COMPANY

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By Wayman Robnett

By Clifford C. Perigo

Name Wayman Robnett  
(Print/Type)

Name CLIFFORD C. PERIGO  
(Print/Type)

Title Manager Transmission

Title SR. Act Ex.

Date Dec 20, 1996

Date 12-20-1996



December 23, 1996

Group Vice President for Marketing,  
Conservation and Production  
Bonneville Power Administration  
905 NE 1 lth Avenue  
Portland, OR 97232

Attention: **Cliff Perigo**  
Senior Account Executive

**Subject: Amendment to Puget Sound Power & Light Company (Puget)  
PNW AC Intertie Capacity Ownership Agreement**

Dear Mr. Perigo:

Enclosed for your signature are two original copies, each signed by Puget, of an Amendatory Agreement to Puget's PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94521. On December 20, 1996, Puget and Bonneville Power Administration entered into the Amendatory Agreement by signing and exchanging a facsimile copy of the enclosed originals.

This amendment was requested by Puget in order to meet the requirement that public utilities that jointly own interstate transmission facilities with non-jurisdictional utilities offer transmission service over their share of the joint facilities. The requirement is contained in the Federal Energy Regulatory Commission Order No. 888, "Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Service by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities."

Please sign both originals and return one set to Puget.

Sincerely,

**Puget Sound Power & Light Company**

By Wayman L. Robinett  
Wayman L. Robinett  
Its: Manager, Transmission

Enclosures





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 30, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-06E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Section 11(b)(1) of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94521 (Capacity Ownership Agreement), between the Bonneville Power Administration (BPA) and Puget Sound Energy, Inc. (Puget) requires Puget to participate in the Remedial Action Scheme (RAS) necessary to maintain Puget's share of intertie capacity.

The RAS includes generator dropping to support north to south schedules on the AC Intertie. Puget has historically self-provided the RAS necessary to support the Puget share of intertie capacity. Therefore, the charges described below are not applicable to Puget, but the information is being provided for your records.

BPA has updated its charge for generator dropping service to account for two separate changes affecting its cost of providing the service: the 2016 upgrade of the DC Intertie and BPA's updated generator dropping rate set in the BP-18 Rate Case. The upgrade to the DC Intertie reduced the amount of generator dropping required because the DC Intertie rating went from 3,100 MW to 3,220 MW. The BP-18 Rate Case increased the cost of providing generator dropping service to reflect 1) the increase in O&M costs; 2) Grand Coulee 3rd power house outages; and 3) an increase in the Handy Whitman cost index.

The charge for generator dropping service has thus fluctuated as follows:

October 1, 2015 – February 28, 2018:	\$6.90 per MW/month
December 20, 2016 – September 30, 2017:	\$6.79 per MW/month
October 1, 2017 – present:	\$9.64 per MW/month

The new charge will be \$9.64 per MW/month.

If you have any questions regarding this information, please contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.03.30  
12:16:51 -07'00'

Transmission Account Executive  
Transmission Sales

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.

Ms. Lisa MacKay, Puget Sound Energy, Inc.

Ms. Kim Gilliland, Bonneville Power Administration



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

January 28, 2019

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Enclosed please find proposed amendments to the FY 2015 through FY 2020 Operating Plans. Sections 9(b)(2)(B)(iii) and 13(k) of the PNW AC Intertie Capacity Ownership Agreement (COA) allow operating plans to be amended to add replacement costs, or to increase forecasted costs. For the following Work Orders, Actual or Updated Costs exceed the Forecasted Costs by at least five percent. These Work Orders were included in prior operating plans, so the proposed Amendments to the Operating Plans below reflect the additional costs.

**Table 1**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plans to be Amended</b>	<b>Forecasted Costs</b>	<b>Actual or Updated Costs<sup>1</sup></b>
00297236	Ashe-Marion No. 2 - Replace Spacer-Dampers (225.3 miles)	2016, 2018, 2019, 2020	\$4,404,125	\$4,750,000
TBD Dixonville 04	Dixonville Substation - Replace Series Capacitor Controls (PAC Project)	2015, 2016, 2017, 2018, 2019, 2020	\$600,000	\$972,000
TBD Grizzly 02	Grizzly Substation - Replace SCADA/Sequential Event Recorder (BPA Project)	2018, 2020	\$1 <sup>2</sup>	\$290,000
TBD Malin 18	Replace Sequential Event Recorder	2018, 2020	\$1 <sup>2</sup>	\$1,300,000

<sup>1</sup> The costs listed under the “Actual or Updated Costs” column are Direct Costs (without Indirect Costs or AFUDC costs). Please note that for work orders with the interim designation of “TBD”, the actual costs are not available at this time so the information listed in Table 1 is an updated cost (rounded).

<sup>2</sup> For the \$1 listed under the column “Forecasted Costs”, this was a placeholder representing that there will be a future cost. As of the date of this letter, we are providing updated information on the costs.

The following Work Orders are proposed to be *added* to the Operating Plans listed below.

**Table 2**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs as of the Date of this Letter</b>	<b>Work Order Approved &amp; Work Order Closed Dates</b>
00374787	Malin Substation - Replace Round Mountain Relays	2015, 2016, 2017, 2018	\$933,000	11/30/2014 & 1/17/2018
00439779	Ashe-Marion No. 2 - Emergency Replacement of Conductor	2017, 2018, 2019	\$4,300,000	3/7/2017 & 2/22/2018
00440381	Slatt Substation - Emergency Replacement of Breaker	2018, 2019	\$1,100,000	3/24/2017 & 11/27/2017

If you would like to recommend a revision to any forecasted cost or dispute the addition of a project, please do so through the Capacity Owner Committee (Committee). Sections 13(d), 13(e) and 13(m) of the COA detail the process and requirements. If we receive no recommendation from the Committee by February 25, 2019, the addition of these projects, as well as increased costs, will be considered accepted on February 25, 2019 according to the contract terms (See Sections 13(e) and 13(m)).

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2019.01.28  
14:53:55 -08'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.  
Ms. Lisa MacKay, Puget Sound Energy, Inc.  
Ms. Kim Gilliland, Bonneville Power Administration

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764	_____	_____	_____	_____
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

February 12, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Listed in Table 1 below are the Schedule C Replacement Projects energized from April 2016 to April 2017. Table 1 summarizes the work order numbers, project information, and Puget Sound Energy, Inc's (Puget) pro rata shares of the project costs under Contract No. DE-MS79-94BP94521, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date<sup>1</sup></b>	<b>Puget Cost Share</b>
00339633	Chief Joseph Substation – Security Enhancements	7/7/2018	\$27,044
00356246	Grizzly Substation – Replace Analog Transfer Trip Equipment	7/21/2018	\$843
00356248	Sand Spring Compensation Station – Replace Analog Transfer Trip Equipment	8/5/2018	\$17,349
00401519	John Day Substation – Station Service Cable Replacement	2/7/2018	\$3,472
00404279	Fort Rock Compensation Station – Emergency Replacement of Transfer Switch Bank No. 1	7/10/2018	\$14,972

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for work order No. 00401519, it means that the work order was closed, but that the work order and Operating Plan were later amended. Work order No. 00401519 was amended to add the John Day Substation project cost pursuant to section 13(k) of the COA.

The charges for these projects will be included in Puget's February transmission bill to be sent in March 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00358697	Malin Substation – Replace Analog Transfer Trip Equipment	2018	Work Order Cancelled
00379615	Malin Substation – Malin Physical Security Enhancements	2016	Not applicable to COA
TBD Alvey 04	Alvey Substation – Replace Line Loss Logic Equipment for Marion Alvey Line	2016, 2018	Replaced by Work Order 00339242
TBD Alvey 05	Alvey Substation – Replace Equipment Related to Line Loss Logic/RAS	2016, 2018	Replaced by Work Order 00339242

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud bpa gov  
Date: 2018 02 12 15:56:20  
-08'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.  
Ms. Lisa MacKay, Puget Sound Energy, Inc.  
Ms. Kim Gilliland, Bonneville Power Administration

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

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**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

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**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

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**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> Percent (%) applied to PNWAC (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 1, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Enclosed for your records are two updated Exhibits: Exhibit F, Revision No. 1 and Exhibit G Revision No. 1 of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94521, between the Bonneville Power Administration and Puget Sound Energy, Inc.

A draft Exhibit F, Revision No. 1 and draft Exhibit G, Revision No. 1 were provided as part of the document packet at the October 26, 2017 3<sup>rd</sup> AC Capacity Owners Annual Meeting.

The primary changes identified under Exhibit F, Revision No. 1 are as follows:

1. Add footnotes to clarify information throughout Exhibit F;
2. Add the Shunt Reactor at Alvey Substation, add the breakers and disconnect switches at Slatt Substation, and update several sections in this Exhibit F to reflect equipment added to the Intertie facilities over the years;
3. Add two disconnect switches at Grizzly Substation (for John Day terminals) and two disconnect switches at Marion Substation (for Buckley and Alvey line terminal) that were all inadvertently omitted from the original Exhibit F;
4. Add interchange meter references to Alvey Substation and Captain Jack Substation, add a Relay House to Alvey Substation, and add a Control House to Grizzly Substation and Malin Substation respectively to clarify treatment for these facilities; and
5. Add the percentages for most of the station general facilities at various substations.

The change under Exhibit G, Revision No. 1 is to update the addition of PacifiCorp and that Turlock Irrigation District is the permanent assignee of Power Resources Cooperative and not Pacific Northwest Generating Cooperative.

If you have any questions regarding this information, please contact me by June 18, 2018 at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.06.01 15:13:37 -07'00'

Transmission Account Executive  
Transmission Sales

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.

Ms. Lisa MacKay, Puget Sound Energy, Inc.

Ms. Kim Gilliland, Bonneville Power Administration

2 Enclosures

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b>		
<u>Bank No. 5 Terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100
Station General	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100
• MOD D#5035	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100
Station General <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>
<b>12. Meridian 500 kV Yard (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>For Dixonville Line Terminal</u>		
• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the Captain Jack Line	50	100

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.



*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

<b>PSE</b>	Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company
<b>Seattle</b>	The City of Seattle, City Light Department aka Seattle City Light
<b>Turlock</b>	Turlock Irrigation District
<b>Tacoma Power</b>	City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power
<b>Snohomish</b>	Public Utility District No. 1 of Snohomish County
<b>PacifiCorp</b>	PacifiCorp

<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

July 24, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Pursuant to Section 13(k) and 9(b)(2)(A)(v) of the PNW AC Intertie Capacity Ownership Agreement (COA), Contract No. DE-MS79-94BP94521 between Puget Sound Energy, Inc. (Puget) and the Bonneville Power Administration (BPA), I have enclosed for your review the amendment to the FY 2017 Operating Plan (Amendment).

The Amendment updates Schedules A, B, D, E, F, and G of the FY 2017 Operating Plan to reflect updated costs for FY 2017 and modifies the monthly charge related to those costs. Schedule ABFG is included to support Schedules A, B, F and G of the Operating Plan.

Each year's Operating Plan is used to forecast each Capacity Owner's allocation of qualifying expenses based on their ownership share. This monthly charge is included on each Capacity Owner's transmission bill. After the end of each fiscal year, the Operating Plan is amended to reflect actual, rather than forecasted costs. The pro-rata share of the difference between forecasted and actual costs is reflected as a one-time charge, or credit, on each Capacity Owner's transmission bill.

The actual costs are included in the "Actual" column of the Schedules A, B, D, E, F and G of the Amendment. The actual costs in Schedules D (General Plant), and E (Other-PacifiCorp) are *higher* than the forecast.

The other schedules show that actual costs in Schedules A (Operations), B (Maintenance), F (Contract and Rates), and G (Transmission Scheduling) are *lower* than the forecast.

Overall for FY 2017, actual costs for the BPA portion of the Third AC Intertie were *higher* than the forecasted costs communicated in the October 2, 2015 letter. The costs are higher by \$570,480, as shown on the summary page of the Amendment. The actual costs are \$233 per MW-month, compared to the forecasted costs of \$219 per MW-month in the 2015 letter.

The FY 2017 charge for Puget will be \$66,176 plus \$3,494 interest, calculated pursuant to Section 9(b)(2)(A)(vi) of the COA. Thus, Puget's total one time true-up charge will be \$69,670, in its July 2018 transmission bill to be sent in August 2018.

This letter also serves as notice of an amendment to add five Work Orders to the Schedule Cs of this FY 2017 Operating Plan. Note that one of the Work Orders listed below has been billed and the other was part of a cancellation notice.

<b>Work Order Number / FY 17 Operating Plan Page</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs Estimate as of the Date of this Letter</b>
00248443/ Page 6	Alvey Substation – Replace Analog Transfer Trip Equipment	FY 2012, FY 2013, FY 2014, FY 2015, FY 2017	\$10,000,000
00329379/ Page 14	Marion-Alvey No. 1 – Access Road Improvements	FY 2017, FY 2018	\$729,000
00356246/ Page 28	Grizzly Substation – Replace Analog Transfer Trip Equipment	FY 2017, FY 2018	See Billing notice sent on February 12, 2018
00358697/ Page 29	Malin Substation – Analog Transfer Trip	FY 2017	See Cancellation notice sent on February 12, 2018

This letter also provides notice of amendment to the Schedule Cs of FY 2017 Operating Plan to increase the estimated cost related to the following Work Order:

1. Work Order 00339242 at Alvey Substation (Remedial Action Scheme) was originally forecasted for \$250k. Currently the estimated direct costs are nearly \$1.3M and preliminary notes state that the BPA cost share percentage will be 50%. Please refer to the WO Database Projections Report (June 12, 2018). The increased costs were originally provided in a report from PacifiCorp in April 2017. BPA's information from 2016, regarding the increase, is that the scope was broadened for changes in design, materials and construction.

In addition, we have updated the Schedule C, Table of Contents, to reflect current Work Order information, such as: cancelled Work Orders, Work Orders added to the FY 2017 Operating Plan, updates to Work Order completion dates, and Work Order descriptions.

Please review this information and respond through the Capacity Owners Committee (Committee) as provided in Sections 13(d), (e), and (m) of the COA. If the Committee recommends a revision(s) to any forecast cost, actual cost or General Plant Cost, in this Amendment, BPA will respond as provided in Section 13 of the COA. Pursuant to Sections 13(e) and (m) of the COA, if BPA does not receive a recommendation from the

Committee by August 20, 2018, the addition of these projects, together with the increased cost, will be considered accepted.

If you have any questions regarding this information, please contact me at (360) 619-6704.

Sincerely,



Digitally signed by David  
Fitzsimmons  
Date: 2018.07.24 14:51:23 -07'00'

On behalf of J. Diego Ochoa  
Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.

Ms. Lisa MacKay, Puget Sound Energy, Inc.

Mr. Eric H. Carter, Bonneville Power Administration

**Interest Calculation  
Puget Sound Energy, Inc.  
9/30/2016-5/31/2018**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/30/2016	5/31/2018		609	\$66,176	\$3,493.89
9/30/2016	10/30/2016	3.064%	31		172.21
10/31/2016	11/29/2016	3.065%	30		166.71
11/30/2016	12/30/2016	3.079%	31		173.05
12/31/2016	1/30/2017	3.086%	31		173.45
1/31/2017	2/27/2017	3.091%	28		156.91
2/28/2017	3/30/2017	3.096%	31		174.01
3/31/2017	4/29/2017	3.108%	30		169.04
4/30/2017	5/30/2017	3.121%	31		175.42
5/31/2017	6/29/2017	3.130%	30		170.23
6/30/2017	7/30/2017	3.143%	31		176.67
7/31/2017	8/30/2017	3.159%	31		177.53
8/31/2017	9/29/2017	3.170%	30		172.40
9/30/2017	10/30/2017	3.208%	31		180.31
10/31/2017	11/29/2017	3.216%	30		174.94
11/30/2017	12/30/2017	3.225%	31		181.26
12/31/2017	1/30/2018	3.237%	31		181.93
1/31/2018	2/27/2018	3.239%	28		164.45
2/28/2018	3/30/2018	3.262%	31		183.34
3/31/2018	4/29/2018	3.281%	30		178.46
4/30/2018	5/31/2018	3.302%	32		191.57
			<b>609</b>		<b>3,493.89</b>

"This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release."

**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

$\$9,655,061 / 3450 \text{ MW} / 12 \text{ Months} = \$233.21 / \text{MW-month}$   
**Rounded to \$233 for whole-dollar billing**

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

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Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Operating Revenues</b>						
<b>Sales</b>						
<b>Network</b>						
1    Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617	\$ 133,535	102%
2    Other Network	436,310	461,684	451,685	442,038	446,492	101%
3    Intertie	73,891	78,630	76,368	76,949	76,257	99%
4    Other Direct Sales	263,312	270,592	263,557	265,520	265,824	100%
5 <b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262	41,491	96%
6 <b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945	128,126	105%
7 <b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>	<b>1,091,725</b>	<b>101%</b>
<b>Operating Expenses</b>						
<b>Transmission Operations</b>						
<b>System Operations</b>						
8    INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701	9,903	93%
9    POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945	13,722	98%
10   CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009	23,567	94%
11   TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979	8,029	80%
12   STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118	2,028	96%
13   SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081	23,444	97%
14 <b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>	<b>80,693</b>	<b>94%</b>
<b>Scheduling</b>						
15   RESERVATIONS	1,167	1,383	1,227	1,044	1,211	116%
16   PRE-SCHEDULING	382	276	284	284	211	74%
17   REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929	5,062	103%
18   SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182	3,656	87%
19   SCHEDULING AFTER-THE-FACT	273	289	277	277	305	110%
20 <b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>	<b>10,445</b>	<b>97%</b>
<b>Marketing and Business Support</b>						
21   TRANSMISSION SALES	2,299	2,775	2,834	2,621	2,524	96%
22   MKTG TRANSMISSION FINANCE	-	-	-	-	-	0%
23   MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660	4,465	96%
24   MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116	2,093	99%
25   MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651	7,948	119%
26 <b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>	<b>17,030</b>	<b>106%</b>
27   EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753	16,908	95%
28   LEGAL SUPPORT	2,611	3,548	1,641	1,962	2,304	117%
29   TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522	9,847	73%
30   AIRCRAFT SERVICES	1,094	2,230	2,489	1,839	882	48%
31   LOGISTICS SERVICES	6,685	4,488	4,354	5,151	5,861	114%
32   SECURITY ENHANCEMENTS	889	716	561	561	547	98%
33 <b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>	<b>36,350</b>	<b>89%</b>
34 <b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>	<b>\$ 144,518</b>	<b>94%</b>

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling



Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

TLM ROW VEG  
 \$ 54,759,896  
 SUB Maint  
 \$ 30,860,406

50.84% \$ 59,480,947.02

16.22% \$ 18,970,654.33

8562030295.78% \$ 121,417,590.42 Total Allocation incl. Contr. & Rates.  
 8562030292.00% \$ 116,994,457.86 Total Allocations

\$ 36,509,900.95 SPC+PSC  
 \$ 11,570,907.11 Mtc. Indirects  
 \$ 155,357,995.65 Dir Mtc less Indirects

Report ID: 0061FY17 Run Date/Time: November 07, 2017 06:37  
Requesting BL: TRANSMISSION BUSINESS UNIT Data Source: EPM Data Warehouse  
Unit of Measure: \$ Thousands % of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

<1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.

<2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.

<3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.

<4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
Operating Plan**

**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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**Capacity Ownership Agreement**  
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**EXHIBIT I**  
**Schedule C Table of Contents**

This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

**Capacity Ownership Agreement  
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Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

**Capacity Ownership Agreement  
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Exhibit I Page 6  
Prepared Date: 7/24/2018

*Below is information about work orders added or removed, acronyms and further information.*

<b>Work Order Number(s) ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

<b>Work Order Number(s) REMOVED or to be REMOVED</b>	<b>Correspondence Notes</b>	<b>Page Number</b>
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
FY2017 OPERATING PLAN**

Exhibit I - Page 47  
Prepared Date 7/24/2018

**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,266,580</u></u></b>	<b><u><u>\$2,485,604</u></u></b>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
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- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 48  
 Prepared Date 7/24/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
<b>Total General Plant</b>	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>


<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESOFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESOFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			<b>1,260,992,898</b>

To D-1  


Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 TOTAL GENERAL PLANT		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$397,813.51</b></u>	<u><b>\$381,573.21</b></u>	<u><b>(\$16,240.30)</b></u>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

August 17, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Listed in Table 1 below are the Schedule C Replacement Projects energized from November 2014 to December 2017. Table 1 summarizes the work order numbers, project information, and Puget Sound Energy, Inc.'s (Puget) pro rata shares of the project costs under Contract No. DE-MS79-94BP94521, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date <sup>1</sup>	Puget Cost Share
00248443	Alvey Substation - Install a New Shunt Reactor	10/11/2018	\$1,566,518
00329379	Marion-Alvey No. 1 - Access Road Improvements	8/19/2018	\$33,142
00335841	Marion-Alvey No. 1 - Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	12/19/2018	\$186,488
00339242	Alvey Substation - Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	10/13/2018	\$107,435

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for Work Order No. 00348163, it means that the Work Order was closed, but that the Work Order and Operating Plan were later amended. Work Order No. 00348163 was amended to add the John Day Substation project cost pursuant to Section 13(k) of the COA.

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	Puget Cost Share
00348163	Grizzly-Captain Jack No. 1 - Land Rights Acquisition for Access Road, Structure 156/1	4/11/2018	\$11,367
00381350	Summer Lake Substation - Upgrade Engine Generator	1/6/2019	\$50,810
00396160	Dixonville Substation - 500 kV Relay Replacements to Meridian (PAC Project)	2/21/2019	\$66,007
00396161	Meridian Substation - 500 kV Relay Replacements to Dixonville (PAC Project)	2/21/2019	\$57,500

The charges for these projects will be included in Puget’s August transmission bill to be sent in September 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
00356249	Sycan Compensation Station - Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	2016, 2019	Not Applicable
00432972	Malin Substation - SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	2019	Work Order cancelled
00449853	Ashe-Marion No. 2 - Emergency Replacement of Access Road	2019	Work Order cancelled
TBD Malin 13	Malin Substation - Relay Replacement on the Round Mt. No 1 line	2015, 2017	Combined with TBD Malin 14 project
TBD Malin 14	Malin Substation - Relay Replacement on the Round Mt. No 2 line	2015, 2016, 2017	Combined into BPA Work Order #00374787
TBD Summerlake 03	Summerlake Substation - Work on BPA Relays on the Grizzly line	2015, 2017	Combined into BPA Work Order #00322042

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
TBD Sycan 01	Sycan Compensation Station - Replace Station Battery	2018	Combined into Work Order #00423702
TBD Sycan 02	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 03	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 04	Sycan Compensation Station - Update Grounding Equipment	2018	Combined into Work Order #00423702

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.08.17 14:32:06  
-07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.

Ms. Lisa MacKay, Puget Sound Energy, Inc.

Mr. Eric H. Carter, Bonneville Power Administration

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

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**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	Footnotes									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-94BP94521.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month.

The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

We will have a comprehensive discussion at the November 1, 2018 Annual Meeting. Prior to that meeting, please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa", is written over a faint, illegible background.

JUAN OCHOA  
2018.09.28  
14:41:55 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.  
Ms. Lisa MacKay, Puget Sound Energy, Inc.  
Mr. Eric H. Carter, Bonneville Power Administration

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

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Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
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*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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Project Work Order: 00335885  
 Project Short Description: Land Rights Acquisition for Access Road, Structure 152/2  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie: 25%  
 Estimated Energization Date: 11/15/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00466505  
 Project Short Description: Ground Wire Replacement  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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Project Work Order: TBD Alvey 08  
 Project Short Description: Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 12  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 13  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2022  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** TBD Dixonville-Meridian 02  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Dixonville-Meridian  
**Exhibit F Section:** A.6. Dixonville-Meridian 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	286,736,310	0.0195	5,591,358
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>							<b>1,297,309,592</b>

↑ To D-1

[To Schedule D, Line 1]

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>
<b>B. Other PNW AC Intertie costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020**  
**Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 21, 2018

In reply refer to: TSE/TPP-2

Mr. George Marshall, Manager  
Transmission Policy and Contracts  
Puget Sound Energy, Inc.  
355 110<sup>th</sup> Avenue NE, MSC EST-6E  
Bellevue, WA 98004-5028

Subject: Contract No. DE-MS79-94BP94521

Dear Mr. Marshall:

Listed in Table 1 below is the Schedule C Replacement Project energized in June 2017. Table 1 summarizes the work order number, project information, and Puget Sound Energy, Inc.'s (Puget) pro rata share of the project costs under Contract No. DE-MS79-94BP94521, PNW AC Intertie Capacity Ownership Agreement. The Schedule C referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	Puget Cost Share
00340156	Marion Substation – Transfer Trip Replacement	11/21/2018	\$24,331

The charge for this project will be included in Puget's November transmission bill to be sent in December 2018.

The Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00379612	Grizzly Substation – Physical Security Project	2017	General Plant
00381830	Malin Substation – Replacement of Communication Battery Charger	2017	General Plant
00381831	Fort Rock Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00381833	Sycan Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00384207	Buckley Substation – Replace Line Relay on Slatt Terminal	2019	Not Applicable
TBD Dixonville 05	Dixonville Substation – Regravel Yard	2018, 2019	Not Applicable

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.11.21  
11:55:31 -08'00'

Transmission Account Executive  
Transmission Sales

3 Enclosures

cc:

Ms. Laura Hatfield, Puget Sound Energy, Inc.  
Ms. Lisa MacKay, Puget Sound Energy, Inc.  
Ms. Kimberly Gilliland, Bonneville Power Administration



**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
A. TRANSMISSION LINE FACILITIES		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b>		
<u>Bank No. 5 Terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100
Station General	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100
• MOD D#5035	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100
Station General <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>
<b>12. Meridian 500 kV Yard (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>For Dixonville Line Terminal</u>		
• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the Captain Jack Line	50	100

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

<b>PSE</b>	Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company
<b>Seattle</b>	The City of Seattle, City Light Department aka Seattle City Light
<b>Turlock</b>	Turlock Irrigation District
<b>Tacoma Power</b>	City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power
<b>Snohomish</b>	Public Utility District No. 1 of Snohomish County
<b>PacifiCorp</b>	PacifiCorp

<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

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**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764	_____	_____	_____	_____
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

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**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

\$9,655,061 / 3450 MW / 12 Months = \$233.21 /MW-month  
**Rounded to \$233 for whole-dollar billing**

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

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Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Operating Revenues</b>						
<b>Sales</b>						
<b>Network</b>						
Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617	\$ 133,535	102%
Other Network	436,310	461,684	451,685	442,038	446,492	101%
<b>Intertie</b>	73,891	78,630	76,368	76,949	76,257	99%
<b>Other Direct Sales</b>	263,312	270,592	263,557	265,520	265,824	100%
<b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262	41,491	96%
<b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945	128,126	105%
<b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>	<b>1,091,725</b>	<b>101%</b>
<b>Operating Expenses</b>						
<b>Transmission Operations</b>						
<b>System Operations</b>						
INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701	9,903	93%
POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945	13,722	98%
CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009	23,567	94%
TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979	8,029	80%
STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118	2,028	96%
SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081	23,444	97%
<b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>	<b>80,693</b>	<b>94%</b>
<b>Scheduling</b>						
RESERVATIONS	1,167	1,383	1,227	1,044	1,211	116%
PRE-SCHEDULING	382	276	284	284	211	74%
REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929	5,062	103%
SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182	3,656	87%
SCHEDULING AFTER-THE-FACT	273	289	277	277	305	110%
<b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>	<b>10,445</b>	<b>97%</b>
<b>Marketing and Business Support</b>						
TRANSMISSION SALES	2,299	2,775	2,834	2,621	2,524	96%
MKTG TRANSMISSION FINANCE	-	-	-	-	-	0%
MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660	4,465	96%
MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116	2,093	99%
MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651	7,948	119%
<b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>	<b>17,030</b>	<b>106%</b>
<b>EXECUTIVE AND ADMIN SERVICES</b>	16,630	27,540	28,608	17,753	16,908	95%
<b>LEGAL SUPPORT</b>	2,611	3,548	1,641	1,962	2,304	117%
<b>TRANS SERVICES INTERNAL GENERAL &amp; ADMINISTRATIVE &lt;Note 4</b>	11,047	13,135	14,777	13,522	9,847	73%
<b>AIRCRAFT SERVICES</b>	1,094	2,230	2,489	1,839	882	48%
<b>LOGISTICS SERVICES</b>	6,685	4,488	4,354	5,151	5,861	114%
<b>SECURITY ENHANCEMENTS</b>	889	716	561	561	547	98%
<b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>	<b>36,350</b>	<b>89%</b>
<b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>	<b>\$ 144,518</b>	<b>94%</b>

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling

Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

<p>TLM ROW VEG                  \$ 54,759,896                  SUB Maint                  \$ 30,860,406</p>	<p>50.84% \$ 59,480,947.02</p> <p>16.22% \$ 18,970,654.33</p> <p>8562030295.78% \$ 121,417,590.42</p> <p>8562030292.00% \$ 116,994,457.86</p>	<p>Total Allocation incl. Contr. &amp; Rates.</p> <p>Total Allocations</p>
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<p>\$ 36,509,900.95 SPC+PSC</p> <p>\$ 11,570,907.11 Mtc. Indirects</p> <p>\$ 155,357,995.65 Dir Mtc less Indirects</p>
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Report ID: 0061FY17  
 Requesting BL: TRANSMISSION BUSINESS UNIT  
 Unit of Measure: \$ Thousands

Run Date/Time: November 07, 2017 06:37  
 Data Source: EPM Data Warehouse  
 % of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

- <1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.
- <2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.
- <3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.
- <4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
Operating Plan**

**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE



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Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

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Exhibit I Page 6  
Prepared Date: 7/24/2018

*Below is information about work orders added or removed, acronyms and further information.*

<b>Work Order Number(s) ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

<b>Work Order Number(s) REMOVED or to be REMOVED</b>	<b>Correspondence Notes</b>	<b>Page Number</b>
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

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- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,266,580</u></u></b>	<b><u><u>\$2,485,604</u></u></b>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
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- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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CAPACITY OWNERSHIP AGREEMENT  
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 SCHEDULE D-1 WORKSHEET

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<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
<b>Total General Plant</b>	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>

<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.


<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESOFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESOFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			<b>1,260,992,898</b>

To D-1  


Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
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 SCHEDULE D-3 WORKSHEET

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**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	(112,221,000)	0.0600	(6,733,260)
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 52  
 Prepared Date 7/24/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 <b>TOTAL GENERAL PLANT</b>		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

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## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$397,813.51</u></b>	<b><u>\$381,573.21</u></b>	<b><u>(\$16,240.30)</u></b>

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## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

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**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

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**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

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**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to**  
**PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	<b>Total from Schedule C:</b>	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	<b>Schedule C Total After Proration:</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
9	<b>Customer Percentage Applied from Exhibit G</b>									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	<b>Exhibit G</b>									
19	<b>Customer</b>	<b>Percentage</b>								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	



**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

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**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



Contract No. DE-MS79-94BP94521

July 29, 1994

The Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

Attention: Mr. Patrick McRae -- YC-911  
Senior Account Executive

**Re: Temporary Transmission Service**

Dear Patrick:

In response to your letter to Puget dated July 25, 1994, Puget Sound Power & Light Company ("Puget") agrees to provide to the Bonneville Power Administration ("Bonneville") temporary transmission service pursuant to and subject to the following:

1. Puget shall, subject to the immediately succeeding sentence, provide to Bonneville transmission service for the transmission to Bonneville's Ellensburg Substation of up to four (4) megawatts of electric power delivered by Bonneville to Puget's White River Substation (such electric power so delivered, "Electric Power"). Puget shall provide such transmission service for a three (3) week period (or for such longer period as Puget and Bonneville may agree upon) commencing at 0000 hours on any day from August 4, 1994, through August 15, 1994; provided, however that such transmission service shall be provided by Puget during such period only to the extent that system capability and energy are, in Puget's sole determination, available to Puget for such purpose.

2. Bonneville shall, at its own cost and expense, install and, during the period of service referred to in paragraph 1 above, operate and maintain metering equipment that will measure the energy delivered by Puget to Bonneville's Ellensburg Substation pursuant to this letter agreement.

[07772-0375/BA942090.032]

The Bonneville Power Administration  
Attention: Mr. Patrick McRae  
July 29, 1994  
Page 2

3. To compensate Puget for transmission losses incurred by Puget in providing the transmission service contemplated by this letter agreement, Bonneville shall, during each hour of the period of service referred to in paragraph 1 above, make available to Puget at Puget's White River Substation, contemporaneously with the delivery of Electric Power, an amount of power equal to (a) the amount of Electric Power delivered by Bonneville in such hour multiplied by (b) 1.085 (the same loss factor used for transmission service to the Teanaway point of delivery under the General Transfer Agreement).

4. This letter agreement is subject to the rules, regulations, orders and other requirements, now or hereafter in effect, of all regulatory authorities having jurisdiction over this letter agreement, Puget or Bonneville, including but not limited to the Federal Energy Regulatory Commission. All laws, ordinances, rules, regulations, orders and other requirements, now or hereafter in effect, of regulatory authorities that are required to be incorporated in agreements of this character are by this reference incorporated in this letter agreement.


5. This letter agreement may be amended only with the express written consent of both Bonneville and Puget and no provision of this letter agreement shall be varied or contradicted by any oral agreement, course of dealing or performance or otherwise except as may be set forth hereafter in a written agreement signed by both Bonneville and Puget.

The Bonneville Power Administration  
Attention: Mr. Patrick McRae  
July 29, 1994  
Page 3

Please sign the enclosed duplicate original of this letter agreement in the space provided below and return such original of this letter agreement to Puget.

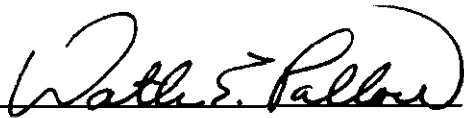
Very truly yours,

PUGET SOUND POWER & LIGHT  
COMPANY

By   
J. R. Jauckhart  
Vice President Power Planning

AGREED TO BY:

THE BONNEVILLE POWER  
ADMINISTRATION

By 

Its Group Vice President, Marketing, Conservation and Production

m

**Department of Energy**

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 17, 2010

In reply refer to: TSE/TPP-2

Contract No. 10TX-14834  
Letter Agreement

Mr. Doug Faulkner  
Manager, Resource Integration  
Puget Sound Energy, Inc.  
P.O. Box 97034  
Bellevue, WA 98009-9734

Dear Mr. Faulkner:

This Letter Agreement (Agreement) reconciles the outstanding net over-return of losses by Puget Sound Energy, Inc. (Puget) to the Bonneville Power Administration (Bonneville) for transmission service for the time period between July 1, 2001 and August 31, 2009. Bonneville and Puget are sometimes referred to individually as "Party" and jointly as "Parties."

Therefore, Bonneville and Puget agree as follows:

1. From July 1, 2001, through August 31, 2009, Puget over-and-under returned losses for schedules under multiple contracts, resulting in a net over-return to Bonneville of 127,271 MWh. Bonneville agrees to financially compensate Puget for such net over-return. The Parties determined that the monthly average of the Dow Jones Mid-C Daily Index provides the best reflection of the cost to Puget of over-returning the transmission losses for the months involved. For the 127,271 MWh, this value is determined to be \$5,601,664.00. Attachments A, B and C describe the calculation of the 127,271 MWh of losses and the associated compensation amount of \$5,601,664.00.
2. In order to compensate Puget for the 127,271 MWh of net over-returns as described above, Bonneville shall pay Puget a lump sum amount of \$5,601,664.00. Bonneville shall pay such amount to Puget by electronic funds transfer no later than 20 days following the date Puget provides Bonneville with an invoice and its banking instructions for the payment.

*ma*

3. The Parties agree that this Agreement constitutes full and final settlement regarding over-and-under-returned losses by Puget to Bonneville during the period July 1, 2001, through August 31, 2009 for the following contracts:

14-03-001-14502	DE-MS79-88BP92427
14-03-001-13439	DE-MS79-88BP92461
14-03-45241	DE-MS79-90BP92781
DE-MS79-94BP93947	01TX-10748
14-03-001-13574	06TX-12195
14-03-39361	03TX-11539
DE-MS79-95BP93081	DE-MS79-94BP94521

Neither Party may pursue any further action against the other related to these losses, whether in dispute resolution, in court, at the Federal Energy Regulatory Commission or elsewhere, other than to enforce this Agreement.

4. This Agreement represents the entire agreement of the Parties. This Agreement supersedes any agreements and representation made by the Parties in all prior discussions, negotiations and agreements, whether oral or written, relating to the subject matter of this Agreement.

If you are in agreement with the foregoing terms and conditions, please indicate your agreement by signing both originals and returning one executed original to my attention at one of the following addresses:

First Class Mail

Overnight Delivery Service

Bonneville Power Administration  
Mail Stop: TSE/TPP-2  
P.O. Box 61409  
Vancouver, WA 98666-1409

Bonneville Power Administration  
Mail Stop: TSE/TPP-2  
7500 NE 41<sup>st</sup> Street - Suite 130  
Vancouver, WA 98662-7905

The remaining executed original is for your files. If you have any questions, please do not hesitate to call me at (360) 619-6015.

Sincerely,

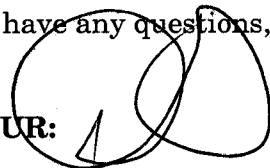
*Toni L. Timberman*

Toni L. Timberman  
Senior Transmission Account Executive  
Transmission Sales

1 Enclosure

CONCUR:

By:



Name: \_\_\_\_\_  
(Print/Type)

David Mills  
Director

Title: \_\_\_\_\_

Energy Supply & Planning  
Puget Sound Energy, Inc

Date: \_\_\_\_\_

11/19/10



**ATTACHMENT A**  
**Over-and-Under Returned Losses - Puget Sound Energy, Inc.**

**NORTHERN INTERTIE SUMMARY OF LOSSES**

Time Period: July 1, 2001 through August 31, 2009

MWh = 9,253

Value = \$484,741.00

**Summary of Dollars & MWhs Associated w/Losses**

*Losses Computed as .3% of Net Scheduled Energy on Puget's Share of the Northern Intertie.*

**Contract No. DE-MS79-95BP93081**

2001			
	HLH	LLH	Totals
dollars	\$20,201	\$11,003	\$31,204
mwh	718	371	1,089
\$/mwh	\$28.14	\$29.64	\$28.65

2002			
	HLH	LLH	Totals
dollars	\$75,433	\$18,286	\$93,719
mwh	2,872	881	3,754
\$/mwh	\$26.26	\$20.75	\$24.97

2003			
	HLH	LLH	Totals
dollars	\$64,763	\$32,201	\$96,964
mwh	1,580	943	2,522
\$/mwh	\$41.00	\$34.16	\$38.44

2004			
	HLH	LLH	Totals
dollars	\$101,936	\$55,767	\$157,702
mwh	2,289	1,452	3,741
\$/mwh	\$44.53	\$38.41	\$42.16

2005			
	HLH	LLH	Totals
dollars	\$129,743	\$45,507	\$175,250
mwh	1,862	799	2,661
\$/mwh	\$69.68	\$56.94	\$65.86

2006			
	HLH	LLH	Totals
dollars	\$70,131	\$55,015	\$125,146
mwh	1,465	1,442	2,907
\$/mwh	\$47.88	\$38.14	\$43.05

2007			
	HLH	LLH	Totals
dollars	\$81,990	\$38,555	\$120,545
mwh	1,389	861	2,250
\$/mwh	\$59.02	\$44.77	\$53.57

2008			
	HLH	LLH	Totals
dollars	-\$43,191	-\$25,927	-\$69,117
mwh	-903	-723	-1,626
\$/mwh	\$47.84	\$35.86	\$42.51

2009			
	HLH	LLH	Totals
dollars	-\$126,681	-\$119,991	-\$246,672
mwh	-3,825	-4,221	-8,046
\$/mwh	\$33.12	\$28.43	\$30.66

Total for all years			
	HLH	LLH	Totals
dollars	\$374,324	\$110,417	\$484,741
mwh	7,447	1,805	9,253
\$/mwh	\$50.26	\$61.16	\$52.39

Source of prices: DJMidC Firm Monthly Indexes

**ATTACHMENT B**  
**Over-and-Under Returned Losses - Puget Sound Energy, Inc.**

**SOUTHWEST WHEELING SUMMARY OF LOSSES**

Time Period: July 1, 2001 through December 31, 2005

MWh = 592

Value = \$11,439.00

**Summary of Dollars & MWhs Associated w/Losses**  
**Losses for Schedules With Owner/NFP Product Code 99**  
**AC Intertie Losses on NFP share and BPA Share**  
**Contract No. DE-MS79-94BP94521**

2001			
	HLH	LLH	Totals
dollars	\$1,311	\$727	\$2,037
mwh	194	-28	166
\$/mwh	\$6.77	-\$26.15	\$12.30

2004			
	HLH	LLH	Totals
dollars	-\$11,164	\$16,063	\$4,899
mwh	-224	395	170
\$/mwh	\$49.80	\$40.70	\$28.75

2002			
	HLH	LLH	Totals
dollars	\$21,987	\$542	\$22,529
mwh	805	-128	676
\$/mwh	\$27.32	-\$4.22	\$33.32

2005			
	HLH	LLH	Totals
dollars	\$253	-\$685	-\$432
mwh	3	-14	-11
\$/mwh	\$92.31	\$49.36	\$38.78

2003			
	HLH	LLH	Totals
dollars	-\$20,635	\$3,042	-\$17,594
mwh	-484	75	-409
\$/mwh	\$42.65	\$40.61	\$43.02

Total for all years			
	HLH	LLH	Totals
dollars	-\$8,249	\$19,688	\$11,439
mwh	293	299	592
\$/mwh	-\$28.16	\$65.77	\$19.32

Source of prices: DJMidC Firm Monthly Indexes

**ATTACHMENT C**  
**Over-and-Under Returned Losses - Puget Sound Energy, Inc.**

**IR AND PTP WHEELING SUMMARY OF LOSSES**

Time Period: July 1, 2001 through August 31, 2009

MWh = -137,116

Value = \$-6,097,844

**Summary of Dollars & MWhs Associated w/Losses**

*IR and PTP Wheeling Loss Calculations*

**Contract No's 14-03-001-14502, 14-03-001-13439, 14-03-45241, 14-03-001-13574, 14-03-39361, DE-MS79-88BP92427, DE-MS79-88BP92461, DE-MS79-90BP92781, DE-MS79-94BP93947, 01TX-10748, 03TX-11539 and 06TX-12195.**

2001			
	HLH	LLH	Totals
dollars	-\$150,521	-\$109,832	-\$260,353
mwh	-4,574	-3,818	-8,392
\$/mwh	\$32.91	\$28.76	\$31.02

2002			
	HLH	LLH	Totals
dollars	-\$137,999	-\$106,451	-\$244,450
mwh	-3,727	-3,104	-6,831
\$/mwh	\$37.02	\$34.30	\$35.79

2003			
	HLH	LLH	Totals
dollars	-\$325,338	-\$191,387	-\$516,725
mwh	-7,982	-5,306	-13,288
\$/mwh	\$40.76	\$36.07	\$38.89

2004			
	HLH	LLH	Totals
dollars	-\$198,844	-\$225,096	-\$423,940
mwh	-5,817	-7,398	-13,215
\$/mwh	\$34.18	\$30.43	\$32.08

2005			
	HLH	LLH	Totals
dollars	-\$819,700	-\$490,377	-\$1,310,076
mwh	-12,476	-9,013	-21,489
\$/mwh	\$65.70	\$54.41	\$60.97

2006			
	HLH	LLH	Totals
dollars	-\$446,002	-\$331,631	-\$777,632
mwh	-9,289	-7,867	-17,157
\$/mwh	\$48.01	\$42.15	\$45.33

2007			
	HLH	LLH	Totals
dollars	-\$492,988	-\$352,803	-\$845,790
mwh	-8,959	-7,654	-16,613
\$/mwh	\$55.03	\$46.10	\$50.91

2008			
	HLH	LLH	Totals
dollars	-\$667,772	-\$405,735	-\$1,073,507
mwh	-9,976	-7,562	-17,538
\$/mwh	\$66.94	\$53.65	\$61.21

2009			
	HLH	LLH	Totals
dollars	-\$429,143	-\$216,227	-\$645,370
mwh	-13,991	-8,602	-22,593
\$/mwh	\$30.67	\$25.14	\$28.56

Total for all years			
	HLH	LLH	Totals
dollars	-\$3,668,305	-\$2,429,539	-\$6,097,844
mwh	-76,791	-60,324	-137,116
\$/mwh	\$47.77	\$40.27	\$44.47

Source of prices: DJMidC Firm Monthly Indexes

# Seattle City Light



Gary Zarker, Superintendent  
Norman B. Rice, Mayor

December 8, 1995

Department of Energy  
Bonneville Power Administration  
905 N.E. 11th Avenue  
Portland, Oregon 97232  
Attn: Group Vice President for Marketing,  
Conservation and Production  
Patrick G. McRae  
Senior Account Executive

**Re: Pacific Northwest AC Intertie Capacity Ownership Agreements  
-- Operating Plans for Fiscal Years 1996 and 1997**

Gentlemen and Ladies:

This letter refers to each of the PNW AC Intertie Capacity Ownership Agreements, Contract Nos. DE-MS79-94BP94521, DE-MS79-94BP94522, DE-MS79-94BP94523, DE-MS79-94BP94524, DE-MS79-94BP94525 and DE-MS79-94BP94528, as each has been amended to the date hereof (the "Capacity Ownership Agreements"). All capitalized terms used in this letter agreement, unless otherwise defined in this letter agreement, have the respective meanings set forth for such terms in the Capacity Ownership Agreements.

As provided in agreements between Bonneville and each of the Capacity Owners (i.e., Contract Nos. 95MS-95121, 95MS-95122, 95MS-95123, 95MS-95124, 95MS-95125 and 95MS-95126), Bonneville agreed to extend until December 8, 1995, the time limit for the Committee to recommend, pursuant to subsection 13(e) of the Capacity Ownership Agreements, revisions to the Operating Plans for fiscal years 1996 and 1997 submitted to the Committee by Bonneville on August 1, 1995 (the "Initial Operating Plans"). Pursuant to such agreements, Bonneville and the

Committee have in the meantime met in collaborative sessions to attempt to reach mutual agreement on elements of the Operating Plans. As a result of such sessions, Bonneville submitted to the Committee on December 6, 1995, revised Operating Plans for fiscal years 1996 and 1997 (the "Revised Operating Plans"). Each of the Capacity Owners and Bonneville, believing that agreement on elements of the Operating Plans has been reached, therefore agree as follows:

1. The Committee hereby submits to Bonneville the enclosed Revised Operating Plans as the Committee's recommended revisions to all of the forecast costs and General Plant Costs in the Initial Operating Plans pursuant to subsection 13(e) of the Capacity Ownership Agreements (the "Recommended Revisions").

2. Pursuant to subsection 13(g) of the Capacity Ownership Agreements, (a) Bonneville hereby accepts the Recommended Revisions in their entirety for all purposes of the Capacity Ownership Agreements, (b) Bonneville shall not reject the Recommended Revisions and (c) Bonneville shall not propose any action that is responsive to the Committee's Recommended Revisions and that is different from Bonneville's proposal contained in the Initial Operating Plans or in the Revised Operating Plans.

3. The Revised Operating Plans constitute, for all purposes of the Capacity Ownership Agreements, the Operating Plans setting forth the Operations Cost, Maintenance Cost, Replacement Costs and Reinforcement Costs, General Plant Cost, Other Costs, Contracts and Rates Costs, Power Costs, Power Scheduling Costs and End of Term Costs for fiscal years 1996 and 1997, until the Revised Operating Plans are amended (if at all) pursuant to subsection 13(k) of the Capacity Ownership Agreements.

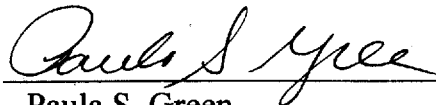
4. No amendment, change or other modification of this letter agreement shall be valid unless set forth in a writing hereafter signed by Bonneville and by or on behalf of each of the Capacity Owners.

Department of Energy  
Bonneville Power Administration  
December 12, 1995  
Page 3

Bonneville may enter into this letter agreement by signing each of the originals of this letter agreement in the space provided and returning one executed original to each of the Capacity Owners.


Very truly yours,

**City of Seattle  
City Light Department  
on behalf of each of the  
Capacity Owners and the  
Capacity Owners' Committee**

By   
Paula S. Green  
Director of Power Management,  
Wholesale Branch

ACCEPTED AND AGREED TO BY:

**The Bonneville Power Administration**

By   
Patrick G. McRae  
Senior Account Executive

Enclosures

**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

\$9,655,061 / 3450 MW / 12 Months = \$233.21 /MW-month  
**Rounded to \$233 for whole-dollar billing**

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <Note 1	E	F
	FY 2016	FY 2017					FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast		Actuals	Actuals per Forecast	
<b>Operating Revenues</b>								
<b>Sales</b>								
<b>Network</b>								
1    Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617		\$ 133,535	102%	
2    Other Network	436,310	461,684	451,685	442,038		446,492	101%	
3    Intertie	73,891	78,630	76,368	76,949		76,257	99%	
4    Other Direct Sales	263,312	270,592	263,557	265,520		265,824	100%	
5    Miscellaneous Revenues	44,033	39,154	42,431	43,262		41,491	96%	
6    Inter-Business Unit Revenues	114,459	117,591	112,403	121,945		128,126	105%	
7 <b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>		<b>1,091,725</b>	<b>101%</b>	
<b>Operating Expenses</b>								
<b>Transmission Operations</b>								
<b>System Operations</b>								
8    INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701		9,903	93%	
9    POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945		13,722	98%	
10   CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009		23,567	94%	
11   TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979		8,029	80%	
12   STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118		2,028	96%	
13   SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081		23,444	97%	
14 <b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>		<b>80,693</b>	<b>94%</b>	
<b>Scheduling</b>								
15   RESERVATIONS	1,167	1,383	1,227	1,044		1,211	116%	
16   PRE-SCHEDULING	382	276	284	284		211	74%	
17   REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929		5,062	103%	
18   SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182		3,656	87%	
19   SCHEDULING AFTER-THE-FACT	273	289	277	277		305	110%	
20 <b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>		<b>10,445</b>	<b>97%</b>	
<b>Marketing and Business Support</b>								
21   TRANSMISSION SALES	2,299	2,775	2,834	2,621		2,524	96%	
22   MKTG TRANSMISSION FINANCE	-	-	-	-		-	0%	
23   MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660		4,465	96%	
24   MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116		2,093	99%	
25   MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651		7,948	119%	
26 <b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>		<b>17,030</b>	<b>106%</b>	
27   EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753		16,908	95%	
28   LEGAL SUPPORT	2,611	3,548	1,641	1,962		2,304	117%	
29   TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522		9,847	73%	
30   AIRCRAFT SERVICES	1,094	2,230	2,489	1,839		882	48%	
31   LOGISTICS SERVICES	6,685	4,488	4,354	5,151		5,861	114%	
32   SECURITY ENHANCEMENTS	889	716	561	561		547	98%	
33 <b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>		<b>36,350</b>	<b>89%</b>	
34 <b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>		<b>\$ 144,518</b>	<b>94%</b>	

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling

Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Transmission Maintenance</b>						
<b>System Maintenance</b>						
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872 113%
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860 98%
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574 92%
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921 108%
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589 104%
40	JOINT COST MAINTENANCE	230	113	8	8	190 2242%
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348 89%
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401 118%
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427 0%
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796 102%
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784 91%
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762 101%</b>
<b>Environmental Operations</b>						
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6 0%
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161 101%
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166 101%</b>
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929 101%</b>
<b>Transmission Engineering</b>						
<b>System Development</b>						
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576 133%
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601 102%
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896 163%
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684 78%
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192 70%
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291 102%
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240 102%</b>
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240 102%</b>
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>						
<b>BBL Acquisition and Ancillary Products and Services</b>						
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947 100%
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407 100%
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639 98%
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993 100%</b>
<b>Non-BBL Acquisition and Ancillary Products and Services</b>						
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128 89%
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198 8088%
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850 90%
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239 0%
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506 88%
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921 99%</b>
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914 100%</b>
<b>Transmission Reimbursables</b>						
<b>Reimbursables</b>						
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459 164%
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187 106%
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646 158%</b>
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646 158%</b>

TLM ROW VEG

\$ 54,759,896

SUB Maint

\$ 30,860,406

\$ 36,509,900.95 SPC+PSC

\$ 11,570,907.11 Mtc. Indirects

\$ 155,357,995.65 Dir Mtc less Indirects

50.84% \$ 59,480,947.02

16.22% \$ 18,970,654.33

8562030295.78% \$ 121,417,590.42 Total Allocation incl. Contr. & Rates.

8562030292.00% \$ 116,994,457.86 Total Allocations

Report ID: 0061FY17  
 Requesting BL: TRANSMISSION BUSINESS UNIT  
 Unit of Measure: \$ Thousands

Run Date/Time: November 07, 2017 06:37  
 Data Source: EPM Data Warehouse  
 % of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

- <1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.
- <2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.
- <3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.
- <4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
Operating Plan**

**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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**Capacity Ownership Agreement**  
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**Schedule C Table of Contents**

This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

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Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

**Capacity Ownership Agreement  
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Exhibit I Page 6  
Prepared Date: 7/24/2018

*Below is information about work orders added or removed, acronyms and further information.*

<b>Work Order Number(s) ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

<b>Work Order Number(s) REMOVED or to be REMOVED</b>	<b>Correspondence Notes</b>	<b>Page Number</b>
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
FY2017 OPERATING PLAN**

Exhibit I - Page 47  
Prepared Date 7/24/2018

**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,266,580</u></u></b>	<b><u><u>\$2,485,604</u></u></b>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 48  
 Prepared Date 7/24/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
<b>Total General Plant</b>	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>

<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESOFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESOFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			1,260,992,898

↑ To D-1  
↓

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 TOTAL GENERAL PLANT		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 2000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 2000909, 2000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 2000925, 2000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

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## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$397,813.51</b></u>	<u><b>\$381,573.21</b></u>	<u><b>(\$16,240.30)</b></u>

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## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

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**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
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Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
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*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.



**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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Project Work Order: 00335885  
 Project Short Description: Land Rights Acquisition for Access Road, Structure 152/2  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie: 25%  
 Estimated Energization Date: 11/15/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00466505  
 Project Short Description: Ground Wire Replacement  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 12  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 13  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2022  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Project Work Order:** TBD Dixonville-Meridian 02  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Dixonville-Meridian  
**Exhibit F Section:** A.6. Dixonville-Meridian 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

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Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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**Project Work Order:** TBD Sand Springs 04  
**Project Short Description:** Replace Station Battery (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/30/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>							<b>1,297,309,592</b>

↑ To D-1

[To Schedule D, Line 1]

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

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 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

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 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>
<b>B. Other PNW AC Intertie costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>

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**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020**  
**Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Rec'd via FedEx 9/2/10 @ 12:46pm mo

**Pacific Northwest AC Intertie Capacity**

**Assignment Agreement**

**between**

**The City of Seattle, by and through its City Light Department**

**and**

**EDF Trading North America, LLC**

15107  
and

94522

This Assignment Agreement ("**Assignment Agreement**"), is made and entered into this 31<sup>st</sup> day of August 2010, ("**Execution Date**") by and among The City of Seattle, a Washington municipal corporation, acting by and through its City Light Department with offices at 700 Fifth Ave., Seattle, WA 98104, ("**City Light**" or "**Assignor**"), and EDF Trading North America, LLC ("**Assignee**") with offices at 4700 W. Sam Houston Pkwy N., Suite 250, Houston, TX 77041. Assignee and City Light are sometimes individually referred to in this Assignment Agreement individually as "**Party**" and together as "**Parties**".

**RECITALS**

WHEREAS, City Light holds Capacity Ownership Rights to certain transmission capacity on the Pacific Northwest AC Intertie ("**PACI**") under its PNW AC Intertie Capacity Ownership Agreement with the Bonneville Power Administration dated September 27, 1994 ("**COA**"); and

WHEREAS, City Light is interested in partially assigning certain transmission capacity available under its COA for a limited term; and

WHEREAS, in accordance with Section 6 of the COA, City Light may, with the consent of Bonneville Power Administration, assign all or a portion of its Capacity Ownership Share and associated rights and obligations pursuant to the COA; and

WHEREAS, Assignee desires to obtain transmission capacity through a partial assignment of City Light's Capacity Ownership Share under the COA, and City Light desires to assign to Assignee a portion of its transmission capacity under the COA for a

period of five years and on the terms and conditions set forth in this Assignment Agreement.

NOW, THEREFORE, in consideration of the mutual agreements, covenants and conditions herein contained, the Parties agree as follows:

## **ARTICLE 1 DEFINITIONS**

As used in this Assignment Agreement, the following terms shall have the meanings set forth below. Certain other capitalized terms are defined where they appear in this Assignment Agreement. Capitalized terms used but not defined in this Assignment Agreement shall have the meaning set forth in the COA, BPA Tariff or BPA Business Practices as the case may be.

**"Affiliate"** means with respect to any Person, each Person that directly or indirectly, controls or is controlled by or is under common control with such designated Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities or by contract or otherwise.

**"Assignee"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Assignee's Capacity Percentage"** means 2.087%. See Exhibit C for the table that identifies the assignee's capacity percentage as the ratio of the Assignee's Capacity Share, in MW north-to-south, to BPA's 3,450 MW PACI Rated Transfer Capability.

**"Assignee's Capacity Share"** means 72 MW north-to-south and 55 MW south-to-north and certain rights and obligations pursuant to the COA as specified in Section 3.2 of this Assignment Agreement.

**"Assignee's Scheduling Percentage"** is 1.5%, which means the Assignee's Capacity Share divided by the PNW AC Intertie Rated Transfer Capability.

**"Assignee's Scheduling Share"** means, for any given hour, the MW amount equal to the product of Assignee's Scheduling Percentage and the PNW AC Intertie

Operational Transfer Capability for such hour. At full north-to-south capacity of 4,800 MW, Assignee's Scheduling Share will be equal to 72 MW (4800 \* 1.5/100).

**"Assignment Agreement"** has the meaning set forth in the Preamble.

**"Assignor"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Balancing Authority"** means the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time. For purposes of this definition, the word "Interconnection" shall mean any one of the three major electric system networks in North America; Eastern, Western, and ERCOT.

**"Balancing Authority Area"** means the collection of generation, transmission and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**"Bonneville Power Administration", "BPA" or "Bonneville"** means the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION.

**"BPA Business Practices"** refers to the policies and procedures set forth for doing business with BPA as amended from time to time and published by BPA in their Open Access Same Time Information System (OASIS).

**"BPA Tariff"** means BPA's Open Access Transmission Tariff in effect at the relevant time during the Term.

**"Business Day"** means any day other than Saturday, Sunday, or a legal public holiday as designed in Article 6103 of Title 5, U.S. Code or by Executive Order or federal statute or in accordance with WECC practice and variations as identified in the WECC prescheduling calendar.

**"Calendar Month"** means a month during the Term of this Assignment Agreement commencing at 0000 hours PPT on the first day of the month and ending at 2400 hours PPT on the last day of the month.

**"Capacity Owner"** has the meaning set forth in Section 1 of the COA.

**"Capacity Ownership Agreement" or "COA"** has the meaning set forth in the Recitals to this Agreement.

**"Capacity Ownership Rights"** has the meaning set forth in Section 1 of the COA.

**"Capacity Ownership Share"** has the meaning set forth in Section 1 of the COA.

**"City Light"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Commencement Time"** has the meaning set forth in Section 2.1.

**"Committee"** has the meaning set forth in Section 1 of the COA.

**"Consent Agreement"** has the meaning set forth in Section 2.2.

**"Credit Support"** means any of the following: a bond, Letter of Credit, guarantee or other reasonable and commercially priced security, in an amount as reasonably determined by City Light, and in a form and from a source approved by City Light.

**"Defaulting Party"** has the meaning set forth in Section 7.1.

**"Event of Default"** has the meaning set forth in Section 7.1.

**"Execution Date"** has the meaning set forth in the Preamble.

**"Interest Rate"** means, on any date, the per annum rate of interest equal to the Prime Rate plus two percent (2%) provided that the Interest Rate shall never exceed the maximum rate permitted by applicable law.

**"Letter of Credit"** means an irrevocable, transferable, standby letter of credit, reasonably acceptable in form and substance to the beneficiary thereof, which letter of credit is issued by a Qualified Institution.

**"Material Adverse Change"** means any effect, change, occurrence, development, condition or event that, individually or in the aggregate, has had or would reasonably be expected to have a material adverse effect (financial or otherwise) on Assignee's business, taken as a whole; provided that the following shall not be considered when determining whether a Material Adverse Change has occurred: any effect resulting from (a) any materially adverse change in economic conditions in the industry within the WECC region; (b) any materially adverse change in currency rates; (c) any materially adverse change in any laws or accounting rules generally applicable to similarly situated Persons; (d) any materially adverse change resulting from changes in the international, national, regional or local wholesale or retail gas or power markets, and renewable energy or emissions markets; (e) the commencement, occurrence or

intensification of any war, sabotage or armed hostilities; (f) acts of terrorism; or (g) any materially adverse change in Assignee's business which is cured (including by payment of money) before Assignor requests additional Credit Support.

**"Non-Defaulting Party"** has the meaning set forth in Section 7.1(a).

**"PACI"** has the meaning set forth in the Recitals.

**"Parties"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Payment Due Date"** has the meaning set forth in Section 5.2.

**"Pacific Prevailing Time"** means the prevailing time (i.e., Standard Time or Daylight Savings Time) on any given day in the Pacific Time Zone.

**"Person"** means any natural person, sole proprietorship, partnership, corporation, limited liability company, trust, joint venture, any governmental authority or any incorporated or unincorporated entity or association of any nature.

**"PNW AC Intertie Rated Transfer Capability"** means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.

**"Point of Delivery"** or **"POD"** has the meaning set forth in Section 3.1.

**"Point of Receipt"** or **"POR"** has the meaning set forth in Section 3.1.

**"PPT"** means Pacific Prevailing Time.

**"Preschedule"** means the schedule submitted by the Assignee pursuant to paragraph 3.2(c)(ii)(A) for transactions prepared each Business Day for the period beginning 2400 hours of the current Business Day through 2400 hours of the next Business Day.

**"Prime Rate"** means the rate published in *The Wall Street Journal* under "Money Rates," as the "Prime Rate" from time to time (or, if more than one rate is published, the arithmetic mean of such rates), in either case determined as of the date the obligation to pay interest arises, but in no event more than the maximum rate permitted by Applicable Law.

**"Prudent Utility Practice"** has the meaning set forth in Section 1 of the COA.

**"Qualified Institution"** means a major U.S. commercial bank or a U.S. branch office of a foreign bank, in either case having (i) assets of at least USD \$10 billion and (ii) a Credit Rating from one or more of S&P, Moody's and Fitch, which Credit Rating is at least "A-" from S&P (in the event that such bank has a Credit Rating from S&P), "A3" from Moody's (in the event that such bank has a Credit Rating from Moody's) and "A-" from Fitch (in the event that such bank has a Credit Rating from Fitch).

**"Real Power Losses"** means energy lost during transmission of power caused by the electrical resistance of high-voltage transmission lines.

**"Real-time Schedule"** means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by Assignee.

**"Term"** has the meaning set forth in Section 2.1.

**"Termination Time"** has the meaning set forth in Section 2.1.

**"USD"** means United States Dollars.

## **ARTICLE 2**

### **TERM AND TERMINATION**

**2.1 Term and Termination.** Subject to Section 3.4, the **"Term"** shall commence at 0000 hours on November 1, 2010 (**"Commencement Time"**) and shall terminate at 2400 hours on October 31, 2015 (**"Termination Time"**) All times are PPT. In the event that the COA terminates prior to the Termination Time, this Assignment Agreement shall also terminate coincidentally with the termination of the COA, *provided, however* that if an Event of Default as set forth in Section 7.1(e) causes the termination of the COA, Assignee shall be entitled to a Termination Payment pursuant to section 7.2. Upon termination or expiration of this Assignment Agreement, all accrued liabilities shall survive until satisfied.

**2.2 Conditions Precedent.** This Assignment Agreement is conditional upon and shall not take effect or be enforceable against either Party until (1) confirmation by BPA through execution by BPA of a separate agreement consenting to the partial assignment to the Assignee of the Assignee's Capacity Share and the terms and



conditions of this Assignment Agreement, (the "Consent Agreement") and (2) BPA has completed all necessary scheduling system changes necessary to implement this Assignment Agreement.

### **ARTICLE 3**

#### **ASSIGNMENT OF CAPACITY OWNERSHIP SHARE**

**3.1 Product.** In accordance with the COA and this Assignment Agreement, City Light shall assign and transfer to the Assignee the Assignee's Capacity Share for the Term of this Assignment Agreement. Assignee shall have the right under this Assignment Agreement during any hour of the Term to schedule Assignee's energy up to the Assignee's Scheduling Share.

(a) The "Point of Receipt" or "POR" and "Point of Delivery" or "POD" shall be

(i) South-to-north (1) POR at the California-Oregon border, Captain Jack or Malin substations, and (2) POD at the Washington-Oregon border, John Day substation; and

(ii) North-to-south (1) POR at the Washington-Oregon border, John Day substation, and (2) POD at the California-Oregon border at Captain Jack or Malin substations.

#### **3.2 Assignee's Capacity Share Rights and Obligations.**

(a) During the Term, Assignee shall be entitled to use the Assignee's Capacity Percentage in any manner that is permitted under this Assignment Agreement and is consistent with both the COA and BPA Business Practices.

(b) **No Third Party Wheeling.**

(i) Except as expressly provided in subparagraph 3.2(b)(ii), Assignee shall not use its Assignee's Scheduling Share to transmit power or energy (except for inadvertent power flows) that Assignee does not own at the California-Oregon border or for which transmission Assignee receives any revenue that would be reportable in Assignee's accounting system where revenues received for wheeling for other entities would be booked.

(ii) If Assignee's Scheduling Share is not fully utilized by Assignee in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions, over the unused portion of Assignee's Scheduling Share for such hour but no longer than such hour. Assignee shall not be compensated for Bonneville's usage of any unused portion of Assignee's Scheduling Share. For purposes of this subparagraph 3.2(b)(ii), Assignee's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Assignee has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour for any MW amount of the Assignee's Scheduling Share.

(c) **Scheduling.**

(i) Assignee (and only Assignee) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Assignee's Scheduling Share for such hour. The MW amount of Assignee's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Assignee's north-to-south schedules and south-to-north schedules (net schedules) for such hour.

(ii) Assignee shall submit all schedules of Assignee's Scheduling Share on its own behalf in accordance with the procedures set forth in applicable interchange scheduling standards and BPA Business Practices with specific procedures and exceptions described in paragraphs 3.2(c)(ii)(A) and 3.2(c)(ii)(B). Such procedures may be varied by the mutual agreement of BPA and Assignee's schedulers. Such mutual agreement may, but need not, be written.

(A) **Preschedules.**

(1) Assignee shall submit its Preschedule by e-Tag in accordance with the provisions of the BPA Scheduling Transmission Service Business Practice.

(B) **Real-time Scheduling.** Real-time Schedules shall be submitted by e-Tag in accordance with the provisions of the BPA Scheduling Transmission Service Business Practice for scheduling transmission service or its successor.

(d) **Real Power Losses and Transmission Loss Factor.** Assignee shall be responsible for returning (or arranging for the return of) Real Power Losses to BPA associated with use of Assignee's Scheduling Share during the Term in a manner consistent with applicable BPA requirements. Assignee shall return losses, at its sole cost and expense, and in accordance with Exhibit E of the COA, Item A. Currently, the transmission loss factor is 2.5%, but can change pursuant to the terms of the COA.

### **3.3 City Light Rights and Obligations.**

(a) City Light shall request BPA provide Assignee any information not otherwise publicly available regarding changes to the PACI that would increase or decrease the Assignee's Scheduling Share

(b) In the event, pursuant to Section 7(b) of the COA, City Light is notified by BPA of a change in the PNW AC Intertie Rated Transfer Capability or a substantial change in the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability not otherwise publicly available, City Light shall promptly notify Assignee of such adjustment.

(c) City Light shall make commercially reasonable, good faith efforts to persuade BPA to give fair consideration to Assignee's interests under Section 7(a) and 7(e) of the COA to the extent such interests have been expressed to BPA in writing.

(d) City Light will provide Assignee with the results of any BPA review under Section 13(c)(10) of the COA that results in a revision to the transmission loss factor in Exhibit E, Part A including any additional information provided to City Light by BPA that is pertinent to such review and the results of any arbitration should arbitration be pursued.

(e) City Light retains all rights and responsibilities with respect to the Capacity Owner's Committee under the COA.

(f) Upon execution of this Assignment Agreement, City Light shall provide, within 10 days, written notice to BPA of the assignment.

## **ARTICLE 4 PRICE, CREDIT**

**4.1 Payment Obligations:** During the Term Assignee shall be responsible for the following payment obligations associated with the Assignee's Capacity Share:

(a) **To City Light:** the Price for the Assignee's Capacity Share as shown in Exhibit A, and

(b) **To BPA:** any applicable ancillary services charges except those defined in or set forth on Schedule 1 (Scheduling, System Control and Dispatch Service as defined or similarly described in the BPA Tariff) and Schedule 2 (Reactive Supply and Voltage Control from Generation or Other Sources Service as defined or similarly described in the BPA Tariff) of the BPA Tariff, which will be paid by City Light.

**4.2 Credit Support.**

(a) During the Term, if there is any Material Adverse Change affecting Assignee, City Light, in its discretion, may require Assignee to provide Credit Support sufficient to assure that Assignee will continue to meet its current contractual obligations under this Assignment Agreement and its contractual obligations for the next twelve (12) Months from the date of the demand for Credit Support (or if the remaining Term of this Assignment Agreement is less than twelve (12) Months, for the remaining Term of this Assignment Agreement). Should Assignee be unable to provide the necessary Credit Support, Assignee shall require that EDF Trading Limited, Assignee's indirect parent corporation, shall provide the necessary Credit Support.

(b) Following a demand for Credit Support and until such time as Assignee is no longer experiencing or affected by a Material Adverse Change, Assignee or EDF Trading Limited, whichever the case may be, shall maintain satisfactory Credit Support on an ongoing, rolling basis sufficient to assure its current contractual obligations and its contractual obligations for the following twelve (12) Months. At the request of either Party, Credit Support shall be increased or decreased as appropriate once per calendar month such that the party providing Credit Support will be able to meet its then-current contractual obligations and its future contractual obligations under this Assignment Agreement for the next twelve (12) month period (or if the remaining Term of this Assignment Agreement is less than twelve (12) months, for the remaining Term of this Assignment Agreement).

(c) If Assignee or EDF Trading Limited fails to provide such Credit Support within ten (10) Days of a request for Credit Support or fails to maintain Credit Support as set forth above, City Light may suspend its performance under this Assignment Agreement until such Credit Support is posted or may treat the failure to provide Credit Support as a default and exercise its rights under Article 7 of this Assignment Agreement.

(d) At City Light's written request, Assignee or EDF Trading Limited shall furnish the City Light financial information as may be reasonably required to confirm that Assignee or EDF Trading Limited has not been affected by a Material Adverse Change.

## **ARTICLE 5**

### **BILLING AND PAYMENT**

**5.1 Monthly Billing.** No later than the tenth (10<sup>th</sup>) Day of each calendar month during the Term, City Light shall deliver to Assignee an invoice setting forth the total amount due for the purchase by Assignee of Assignee's Capacity Share for the immediately preceding month as described in Exhibit A.

**5.2 Payments to City Light.** Assignee shall pay the amount specified in the bill to City Light by electronic wire transfer of immediately available funds by the later of ten (10) Days after Assignee's receipt of City Light's invoice or the twentieth (20<sup>th</sup>) Day of the month in accordance with the wire transfer instructions set out in **Exhibit B, Contact Information**, as it may be changed from time to time; *provided, however*, that any changes to such wire transfer instructions shall not be effective until five (5) Business Days after the date on which notice of the change is sent to Assignee and if the due date is not a Business Day, Assignee shall pay the monthly bill on the Business Day following such due date ("**Payment Due Date**"). If Assignee fails to pay an amount when due, it will pay City Light interest on the unpaid balance at the Interest Rate from the Payment Due Date until payment in full.

## **ARTICLE 6**

### **NOTICES; CONTACTS**

6.1 All notices, requests, statements or payments from one Party to the other Party shall be made to the addresses specified in Exhibit B. All notices, requests, or statements from one Party to the other Party shall be made in writing. Notices required to be in writing shall be delivered by the United States Postal Service, hand delivery, overnight delivery, facsimile or e-mail. Notice from one Party to the other Party by facsimile shall (where confirmation of successful transmission is received) be deemed to have been received on the day on which it was transmitted (unless transmitted after 5:00 p.m. at the place of receipt or on a day that is not a Business Day, in which case it shall be deemed received on the next Business Day). Notice from one Party to the other Party by hand delivery or overnight delivery shall be deemed to have been received when delivered. Notices sent by e-mail must be confirmed by e-mail as received by the receiving Party. A Party may change its address by providing notice of the same in accordance herewith.

## **ARTICLE 7**

### **EVENT OF DEFAULT**

7.1 An **"Event of Default"** means with respect to a Party (the **"Defaulting Party"**):

(a) the failure by the Defaulting Party to make, when due, any payment required pursuant to this Assignment Agreement or the COA if such failure is not remedied within 2 Business Days after written notice of such failure is given to the Defaulting Party by the other Party (the **"Non-Defaulting Party"**);

(b) the failure by the Defaulting Party to provide or maintain Credit Support in accordance with the requirements of Section 4.2;

(c) the material breach of any other of the material covenants, terms or conditions of this Assignment Agreement or the COA, where such breach is not remedied within 10 days of written notice of such breach by the Non-Defaulting Party;

(d) the institution, with respect to the Defaulting Party (or any guarantor thereof), by the Defaulting Party (or any guarantor thereof) or by another Person, of a bankruptcy, reorganization, moratorium, liquidation or similar insolvency proceeding or other relief under any bankruptcy or insolvency law affecting creditors'

rights, or the presentation or institution of a petition for the winding-up or liquidation of the Defaulting Party; or

(e) the termination of the COA as a result of circumstances within SCL's reasonable control without Assignee's consent, which in all cases will be deemed to be an Event of Default with respect to Assignor.

**7.2 Rights Upon Event of Default; Termination Payment.** If an Event of Default occurs, the Non-Defaulting Party shall have the right to terminate this Assignment Agreement upon notice to the Defaulting Party, such notice of termination to be effective immediately upon receipt ("**Termination Date**").

(a) If City Light is the Defaulting Party, City Light will pay to Assignee (in addition to any other amounts which may be due from City Light to Assignee) within 10 Business Days after the Termination Date of this Agreement, as a termination payment with respect to this Assignment Agreement, the amount, if any, by which (i) the aggregate amount that Assignee, acting in a commercially reasonable manner, pays or, using its commercially reasonable efforts, would have paid to replace Assignee's Capacity Share for the period between the Termination Date and the Termination Time, exceeds (ii) the aggregate Price that Assignee would have paid in respect of the same such period pursuant to this Assignment Agreement if the Event of Default had not occurred (prorated for any partial Calendar Month on the basis of the number of days in such Calendar Month).

(b) If Assignee is the Defaulting Party, Assignee will pay to City Light (in addition to any other amounts which may be due from Assignee to City Light) within 10 Business Days after the Termination Date, as a termination payment with respect to the Assignee's Capacity Share, an amount equal to the positive difference, if any, obtained by subtracting (xx) the aggregate amount that City Light obtains or, using its commercially reasonable efforts, could have obtained for the Assignee's Capacity Share for the period between the Termination Date and the Termination Time from (yy) the aggregate Price that Assignee would have paid for each Calendar Month (or portion thereof) during that same period pursuant to this Assignment Agreement (prorated for any partial Calendar Month on the basis of the number of days in such Calendar Month).

**7.3 Rights upon Termination of COA.** If the COA terminates for a reason other than that set forth in Section 7.1(e) above, and if Assignor decides in its sole

discretion to pursue claims, and thereafter receives any damages or other compensation in connection with such termination from BPA, Assignor shall pay Assignee its proportionate share of such damages or other compensation, such proportion to be calculated by dividing Assignee's Capacity Share by Assignor's Capacity Ownership Share and factoring in the Assignee's limited duration of rights and obligations.

**7.4 Survival of Liability.** In no event shall termination of this Assignment Agreement for any reason relieve either Party of any liability for any amounts due or payable to the other Party with respect to any period prior to such termination.

## **ARTICLE 8**

### **REPRESENTATIONS AND WARRANTIES; ADDITIONAL COVENANTS**

**8.1 Representations and Warranties of the Parties.** Each Party represents and warrants to the other Party as of the Execution Date as follows:

(a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation, is duly qualified to do business in those jurisdictions in which it is necessary for the conduct of its business and to enter into and perform the transactions contemplated by this Assignment Agreement and the Consent Agreement, except for failures which in the aggregate are not material to the other Parties, and has all requisite corporate or other similar power and authority and the legal right to own and operate its properties and to conduct its business as currently conducted;

(b) the execution, delivery and performance of this Assignment Agreement and the Consent Agreement and the consummation by it of the transactions contemplated hereby and thereby (i) are within its organizational powers and have been or will be duly authorized by all necessary action, and (ii) do not and will not, with the passing of time or giving of notice or both, violate or conflict with its articles or certificate of incorporation, by-laws or comparable constitutive or governing documents as currently composed, any law applicable to it, any order or judgment of any governmental authority applicable to it or any agreement to which it is a party or by which it is bound, nor will it result in the breach, default or termination of any agreement to which it is a party; and



(c) this Assignment Agreement and the Consent Agreement have been duly executed and delivered and constitute a legal, valid and binding obligation of such Party enforceable against such Party in accordance with its terms, except as such enforceability may be limited by Seattle Municipal Code 5.24.005, bankruptcy, insolvency or similar laws affecting the rights of creditors generally, and with regard to equitable remedies, to equitable defenses and the discretion of the court before which proceedings to obtain such remedies may be pending.

(d) except for Assignor's challenge to the Oregon Department of Revenue's tax assessment case (The City of Seattle, et. al. v. Oregon Department of Revenue, Oregon Tax Court No. TC-4946), there is no suit, action, claim, arbitration, proceeding or investigation pending or, to its knowledge, threatened against such Party before any governmental entity that relates to or involves it, or the COA;

(e) it understands and agrees that no Party is acting as a fiduciary, advisor or agent to any other Party with respect to this Consent Agreement or the transactions contemplated hereby; and

(f) no petition or notice has been presented, no order has been presented, no order has been made and no resolution has been passed for its bankruptcy, liquidation, winding-up or dissolution, and no receiver, trustee, custodian or similar fiduciary has been appointed over the whole or any part of any of its assets or income, and it has not received any notice that any other person has any plan or intention of, filing, making or obtaining any such petition, notice, order or resolution or of seeking the appointment of a receiver, trustee, custodian or similar fiduciary.

## **8.2 Additional Representations and Warranties and Covenants of City Light.**

- (a) City Light represents and warrants to Assignee that
  - (i) it is currently a party to the COA and has a Capacity Ownership Share under the COA;
  - (ii) it has the right and power pursuant to City of Seattle Ordinance 123276, subject to BPA approval, to assign all or a part of its Capacity Ownership Share to Assignee on the terms and subject to the conditions set forth in this Assignment Agreement;

- (iii) the COA is in full force and effect and has been duly authorized, executed and delivered by it, and constitutes a legal, valid, binding and enforceable agreement as to it;
- (iv) this Assignment Agreement and the Consent Agreement will not affect the validity of the COA, which will continue to be legal, valid, binding, enforceable and in full force and effect on substantially identical terms following the consummation of the transactions contemplated hereby;
- (v) it is not in breach of or in default under the COA, and it has no knowledge of an event that has occurred which with the passage of time or giving of notice or both would constitute such a default, result in a loss of rights or permit termination, modification or acceleration under, or result in the creation of any lien under the COA (except for Assignor's challenge to the Oregon Department of Revenue's tax assessment case (The City of Seattle, et. al. v. Oregon Department of Revenue, Oregon Tax Court No. TC-4946)) and no such event, condition or circumstance would occur or exist as a result of it entering into or performing its obligations under this Assignment Agreement or the Consent Agreement. It has no knowledge of any state of facts or condition that exists (i) that is or may be reasonably likely to be materially adverse to the rights or obligations of it under the COA or (ii) that is or would reasonably be expected to prevent the performance by it of any of its obligations hereunder or under the COA or the consummation of the transactions contemplated by this Assignment Agreement or the Consent Agreement;
- (vi) it has not entered into any written or oral amendments, supplements, or other modifications of the COA, except as described in the definition of "COA" set forth in the Consent Agreement;

- (vii) no amounts currently due under the COA are delinquent;
- (viii) no party to the COA has provided notice to it that it has repudiated, canceled, suspended, terminated or made any threat to cancel, suspend or otherwise terminate any provision thereof and to its knowledge, no such party is in or subject to a bankruptcy or insolvency proceeding; and
- (ix) there are no disputes, oral agreements or forbearance programs between Consenting Party and Assignor in effect as to the COA.

(b) City Light covenants and agrees that, in connection with this Assignment Agreement, it will comply with all applicable laws, codes, rules, regulations and the terms and conditions of the BPA Business Practices in effect at the applicable time, the COA and the Assignment Agreement, as well as any BPA requirements for the partial assignment of City Light's Capacity Ownership Share to the Assignee.

(c) City Light covenants and agrees that it will take no actions during the Term that would impair, limit or reduce the Assignee's Capacity Share or that would prevent, impair the rights associated with the Assignee's Capacity Share or prevent or limit the right and ability of Assignee to fully use it's Assignee's Capacity Share for its own account and benefit during the Term and subject to the conditions of this Assignment Agreement, provided, however that Assignee is not in breach of this Assignment Agreement.

### **8.3 Additional Covenants of Assignee.**

(a) Assignee covenants and agrees that it will at all times during the Assignment Term be and remain an Eligible Customer under the BPA Tariff.

(b) Assignee covenants and agrees that under and in connection with this Assignment Agreement, including any use by Assignee of the Assignee's Capacity Share, it shall comply with all applicable laws, codes, rules, regulations and the terms and conditions of this Assignment Agreement and the BPA Business Practices in effect at the applicable time and shall act in good faith and take no intentional actions that would impair any rights associated with the Assignee's Capacity Share, City Light's Capacity Ownership Share and the COA.

(c) Assignee covenants and agrees that it shall abide by the provisions of the COA to the extent such obligations are assigned to Assignee under this Assignment Agreement and the Consent Agreement as well as any BPA requirements for the partial assignment of City Light's Capacity Ownership Share to the Assignee.

(d) Assignee covenants and agrees that it shall take no actions that would prevent or limit the right and ability of City Light to fully use the Assignee's Capacity Share for City Light's own account and benefit after the Termination Time or expiration of this Assignment Agreement.

## **ARTICLE 9**

### **INDEMNITY OBLIGATIONS**

**9.1 Assignee** shall defend, indemnify and hold harmless City Light and its officers, partners, directors, members, managers, employees, agents, affiliates and representatives from any liabilities, damages, or penalties, including all related costs and expenses (including attorneys' fees), arising out of or resulting from Assignee's actions or inactions in the use of the Assignee's Capacity Share.

**9.2 City Light** shall defend, indemnify and hold harmless Assignee and its officers, partners, directors, members, managers, employees, agents, affiliates and representatives from any liabilities, damages, or penalties, including all related costs and expenses (including attorneys' fees), directly resulting from City Light's breach of any covenants in Section 8.2.

## **ARTICLE 10**

### **LIMITATION ON LIABILITY**

THE PARTIES ACKNOWLEDGE AND AGREE THAT NOTWITHSTANDING ANYTHING IN THIS AGREEMENT, NO PARTY SHALL BE LIABLE TO THE OTHER PARTIES FOR CONSEQUENTIAL OR INDIRECT LOSS OR DAMAGES OR ANY PUNITIVE, SPECIAL, INCIDENTAL OR EXEMPLARY DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE.

## **ARTICLE 11**

### **MISCELLANEOUS**

**11.1. Currency.** All dollar amounts in this Assignment Agreement are referred to in U.S. dollars and all invoices and payments shall be in U.S. currency.

**11.2. Assignment.** Neither Party may further transfer or assign the rights and obligations under this Assignment Agreement of the Consent Agreement, in whole or in part, without the written consent of the other Party and BPA, which consent shall not be unreasonably withheld.

**11.3. Entire Agreement.** This Assignment Agreement, the attachments thereto and the Consent Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof. There are no prior or contemporaneous agreements or representations affecting the same subject matter other than those herein expressed. Except for any matters which, in accordance with the express provisions of this Assignment Agreement, may be resolved by oral agreement between the Parties, no amendment, modification or change herein shall be enforceable unless reduced to writing and executed by both Parties.

**11.4. Enurement.** This Assignment Agreement shall enure to the benefit of and be binding on the Parties and their respective successors and permitted assigns.

**11.5. Governing Law and Venue.** This Assignment Agreement shall be governed by and construed in accordance with the laws of the State of Washington, without regard to conflict of laws principles to the contrary. The Parties each irrevocably consents to the exclusive jurisdiction and venue of the Superior Courts of King County, Washington.

**11.6. No Waiver.** Except as otherwise provided herein or as agreed by the Parties, no provision of this Assignment Agreement shall be waived except in writing. Any waiver at any time by a Party of its rights with respect to a default under this Assignment Agreement, or any other matter arising in connection with this Assignment Agreement, shall not be deemed a waiver with respect to any other default or matter.

**11.7. Survival Arrangements.** All confidentiality and indemnity rights, all rights of a Party with respect to misrepresentations or breaches of covenants arising prior to any expiration or termination of this Assignment Agreement, and all obligations provided in this Assignment Agreement shall remain in effect for the purpose of compliance with such obligations, unless otherwise provided herein. Without limiting the generality of the foregoing, any obligation to pay any amount due, or any accrued or eligible liability, arising from or as a result of the application of this Assignment Agreement shall survive termination of this Assignment Agreement.

**11.8. No Third-Party Beneficiaries.** This Assignment Agreement is for the benefit of, and shall be enforceable by, the Parties only. This Assignment Agreement is not intended to confer any right or benefit on any third party. No action may be commenced or prosecuted against a Party by any third party claiming as a third-party beneficiary of this Assignment Agreement or any of the transactions contemplated by this Assignment Agreement.

**11.9. Relationship of the Parties.** City Light and Assignee agree that nothing contained in this Assignment Agreement shall be construed to create an association, partnership, trust, joint venture or agency relationship between or City Light and Assignee, or to impose a trust or partnership covenant, obligation or liability on or with regard to either Party. Each Party shall be individually and severally liable for its own obligations hereunder.

**11.10. Counterparts.** This Assignment Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Executed counterparts may be exchanged by fax as evidence of execution and delivery.

**11.11. Time of Essence.** Time is of the essence of this Assignment Agreement.

IN WITNESS WHEREOF, each Party has caused this Assignment Agreement to be executed by its duly authorized representative as of the date first written above.

**EDF Trading North America, LLC**

**THE CITY OF SEATTLE, WASHINGTON  
CITY LIGHT DEPARTMENT**

By: 

By: \_\_\_\_\_

Name: Russell Schneider

Name: Jorge Carrasco

Title: Vice President

Title: Superintendent

Date: 09-01-2010

Date: \_\_\_\_\_

IN WITNESS WHEREOF, each Party has caused this Assignment Agreement to be executed by its duly authorized representative as of the date first written above.

**EDF Trading North America, LLC**

**THE CITY OF SEATTLE, WASHINGTON  
CITY LIGHT DEPARTMENT**

By: \_\_\_\_\_

By: Jorge Carrasco

Name: \_\_\_\_\_

Name: Jorge Carrasco

Title: \_\_\_\_\_

Title: Superintendent

Date: \_\_\_\_\_

Date: 8-31-10



**EXHIBIT A  
PRICE INFORMATION**

**\$ 160,000.00 per month (the "Price").**

**EXHIBIT B  
CONTACT INFORMATION**

**DATE: AUGUST 31<sup>st</sup>, 2010**

**PAGE 1 OF 1**

<p><b>Name: EDF TRADING NORTH AMERICA, LLC</b></p> <p><b><u>All Notices (except invoices):</u></b></p> <p>4700 W. Sam Houston Pkwy N., Suite 250 Houston, TX 77041 Attn: Contract Administration Phone: 281-781-0333 Facsimile: 281-653-1454 Email: <a href="mailto:contract_admin@edftrading.com">contract_admin@edftrading.com</a></p> <p><b><u>Invoices:</u></b></p> <p>Same address as above Attn: Power Accounting Phone: 281.653.1683 Facsimile: 281.653.1033</p>	<p><b>Name: CITY LIGHT</b></p> <p><b><u>All Notices:</u></b></p> <p><b><u>Mailing Address</u></b> City Light Attn: Robin Cross PO Box 34023, Suite 3200 Seattle, WA 98124-4023</p> <p><b><u>Or, if by overnight mail</u></b> City Light Attn: Robin Cross 700 Fifth Avenue, Suite 3200 Seattle, WA 98104 Phone: 206-684-3392</p> <p><b><u>Or, if by fax or e-mail</u></b></p> <p>Facsimile: 206-386-4555 Email: <a href="mailto:robin.cross@seattle.gov">robin.cross@seattle.gov</a></p>
<p><b>Contact Information Modification:</b> Any modifications to the Contact Information shall be provided to the other Party in writing and shall be mailed, faxed or e-mailed.</p>	

**EXHIBIT C**  
**ASSIGNEE'S CAPACITY PERCENTAGE**

	Capacity	Capacity	% ownership
<b>BPA</b>			
<b>sold to</b>	<b>3450</b>		
<b>Puget</b>		<b>400</b>	<b>11.59420</b>
<b>Seattle</b>		<b>160</b>	<b>4.63768</b>
<b>Seattle to EDF</b>		<b>72</b>	<b>2.08696</b>
<b>PNGC</b>		<b>50</b>	<b>1.44928</b>
<b>Tacoma</b>		<b>41</b>	<b>1.18841</b>
<b>Snohomish</b>		<b>42</b>	<b>1.21739</b>
<b>PacifiCorp</b>		<b>32</b>	<b>0.92754</b>
<b>Total Sold</b>		<b>725</b>	<b>21.01449</b>
<b>Portland's PNW AC</b>	<b>950</b>		
<b>PacifiCorp's PNW AC</b>	<b>400</b>		
<b>Total Rated Transfer Capability</b>	<b>4800</b>		

**Scheduling Percentage = Capacity ownership Share / PNW AC Intertie Rated Transfer Capability**

As defined in Exhibit C

<b>Seattle's Scheduling Percentage</b>	<b>3.33333</b>
<b>EDF Scheduling Percentage</b>	<b>1.5</b>

Rec'd via fedex 9/2/10 @ 12:46pm MS

Contract Number: 10TX-15107

**CONSENT AGREEMENT**

executed by

**THE UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

acting by and through the

**BONNEVILLE POWER ADMINISTRATION**

and

**THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT**

and

**EDF TRADING NORTH AMERICA, LLC**

THIS CONSENT AGREEMENT (Consent Agreement) is made and entered into this <sup>31<sup>st</sup></sup> day of August, 2010 (Effective Date) by and among the City of Seattle, by and through its City Light Department (Assignor), EDF Trading North America, LLC (Assignee) and the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Consenting Party) (Assignor, Assignee and Consenting Party are sometimes individually referred in this Consent Agreement as a "Party" and collectively as the "Parties").

WHEREAS, Assignor and Consenting Party are parties to the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94522, dated as of September 27, 1994, together with any and all amendments thereto (the COA);

WHEREAS, Assignee and Assignor have entered, or will enter, into that certain Assignment Agreement, attached hereto, whereby, Assignee will assume a partial assignment of the Assignor's rights and obligations in the COA (Assignment Agreement);

WHEREAS, Section 6 of the COA requires that Assignor obtain Consenting Party's prior written consent to assign or transfer any of its rights, duties and obligations under the COA. Assignor and Assignee desire to obtain such written consent, and Consenting Party desires to grant such consent in accordance with the terms hereof; and

10TX-15107, City of Seattle, City Light Department,  
Bonneville Power Administration and EDF Trading North America, LLC  
Consent Agreement

**RECEIVED**  
SEP 10 2010

WHEREAS, the Parties have entered into this Consent Agreement subject to the satisfaction of certain conditions precedent, as set forth herein.

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants contained herein, and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the Parties do hereby agree as follows:

1. ***Consent to Assignment.*** Effective as of the Effective Date and as required by Section 6 of the COA, Consenting Party hereby approves and consents to the assignment of certain rights and obligations arising out of the COA by Assignor to Assignee as more fully set forth in the Assignment Agreement.
2. ***Assumption of Obligations.*** Effective as of the Effective Time, Assignee shall perform the assigned obligations and responsibilities under the COA as fully set forth in the Assignment Agreement for the term of the Assignment Agreement (“Assignee’s Obligations”). For purposes of this Consent Agreement, “Effective Time” shall mean the Effective Date or the date by which the following conditions precedent have been satisfied, whichever is later:
  - (a) The Parties have fully executed this Consent Agreement; and
  - (b) The Assignment Agreement has become effective pursuant to Article 2 of such Assignment Agreement.

Consenting Party acknowledges and agrees to accept Assignee’s performance of the Assignee’s Obligations and relieves the Assignor of any performance obligation arising out of the Assignee’s Obligations during the term of the Assignment Agreement. Assignee shall perform the Assignee’s Obligations in compliance with the COA. All obligations other than the Assignee’s Obligations under the COA shall remain and be the obligation and responsibility of Assignor (the “Assignor’s Obligations”), including but not limited to those obligations relating to, resulting from, or arising out of any breach of contract or any other actual or alleged failure of Assignor to perform any of the Assignor’s Obligations, in each case arising out of, or relating to, the COA or the performance thereof prior to the Effective Time. Assignee shall not assume, discharge, perform or be responsible in any way for any Assignor’s Obligations. For purposes of this Consent Agreement, “Obligations” means indebtedness, obligations, duties and other liabilities, whether absolute, accrued, contingent, fixed or otherwise, or whether due or to become due with respect to the COA, including, but not limited to, any charges, fees, taxes, assessments, adders or surcharges imposed or authorized by any governmental entity and includes all operational matters.

3. **Additional Agreements.** The Consenting Party, Assignor and Assignee, as applicable, also agree to the following:
- (a) Assignor shall endeavor to provide a minimum of 60 days prior written notice to Consenting Party of any termination of the Assignment Agreement;
  - (b) Assignee shall arrange and maintain with Consenting Party a mutually agreeable point of delivery for return of losses; and
  - (c) Assignee's schedules are subject to the scheduling limitations of the COA and are not eligible for intra-hour scheduling unless otherwise agreed by Consenting Party.
  - (d) Consenting Party shall make available to Assignee on each Working Day, in accordance with Consenting Party's then-current BPA Business Practices or other policies, information regarding Bonneville's PNW AC Intertie Operational Transfer Capability with respect to Preschedule days as defined by the WECC Preschedule Calendar. In the event an emergency or uncontrollable force causes a change in Bonneville's PNW AC Intertie Operational Transfer Capability, Consenting Party shall notify Assignee of such change as soon as practicable.
4. **Capitalized Terms.** Capitalized terms used in this Consent Agreement and not otherwise defined shall have the respective meanings ascribed to such terms in the COA.
5. **Further Actions.** Each of the Parties hereto covenants and agrees, at its own expense, to execute and deliver, at the reasonable request of another Party hereto, such further instruments of transfer and assignment, and to take such other action, as such other Party may reasonably request to more effectively consummate the assignments and assumptions contemplated by this Consent Agreement.
6. **Governing Law.** This Consent Agreement shall be interpreted, construed, and enforced in accordance with Federal law, if applicable, or if no Federal law is applicable, with the laws of the State of Washington, without regard to conflict of laws principles to the contrary.
7. **Notices.** Any notice required under this Consent Agreement shall be in writing and shall be delivered in person; or with proof of receipt by a nationally recognized delivery service or by United States Certified Mail. Notices are effective when received. Any Party may change the name or address for receipt of notice by providing notice of such change. The Parties shall deliver notices to the following person and address:

*If to Assignor:*

Seattle City Light  
Attn: Robin Cross  
PO Box 34023, Suite 3200  
Seattle, WA 98124-4023  
Phone: (206) 684-3392  
Fax: (206) 386-4555  
Email: robin.cross@seattle.gov

*Or, if by Overnight Mail:*

Seattle City Light  
Attn: Robin Cross  
700 Fifth Avenue, Suite 3200  
Seattle, WA 98104

*If to Assignee:*

EDF Trading North America, LLC 4700  
W. Sam Houston Pkwy N. Suite 250  
Houston, TX 77041  
Attn: Contract Administration  
Phone: (281) 781-0333  
Fax: (281) 653-1454  
Email: contract\_admin@edftrading.com

*If to Consenting Party:*

Bonneville Power Administration  
Attn: Transmission Account Executive  
for City of Seattle, City Light  
Department – TSE/TPP-2  
Phone: (360) 619-6016  
Fax: (360) 619-6940

*If by First Class Mail:*

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

*If by Overnight Delivery Service:*

Bonneville Power Administration –  
TSE/TPP-2  
7500 NE 41st Street, Suite 130  
Vancouver, WA 98662-7905

8. **Termination.** If Consenting Party does not receive notice from Assignor and Assignee by September 15, 2010 that the Assignment Agreement has been fully executed, this Consent Agreement shall automatically terminate and be of no further force or effect unless otherwise agreed in writing.
9. **Entire Agreement.** This Consent Agreement, including documents expressly incorporated by reference, constitutes the entire agreement between the Parties. It supersedes all previous communications, representations, or contracts, either written or oral, which purport to describe or embody the subject matter of this Consent Agreement.
10. **No Third Party Beneficiaries.** Except as otherwise expressly provided herein, nothing in this Consent Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty, liability, or obligation to, or standard of care with reference to, any third party, contractual or otherwise, on the part of any Party.
11. **Counterparts.** The Parties agree that this Consent Agreement may be executed in counterparts and that, when taken together, such counterparts constitute but one agreement.

VWD Via Fedex 9/3/10 @ 12:46pm m

12. **Assignment.** This Consent Agreement is binding on any successors and assigns of the Parties. Neither Party may further transfer or assign the rights and obligations under the Assignment Agreement or this Consent Agreement, in whole or in part, without the written consent of the other Party to the Assignment Agreement and the Consenting Party, which consent shall not be unreasonably withheld.

*IN WITNESS WHEREOF*, the Parties have executed this Consent Agreement as of the date first above written.

**Assignor:**

THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT

By: *Jorge Carrasco*

Name: Jorge Carrasco

Title: Superintendent

**Assignee:**

EDF TRADING NORTH AMERICA, LLC

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**Consenting Party:**

UNITED STATES OF AMERICA

Department of Energy

Bonneville Power Administration

By: *Toni L. Timberman*

Name: Toni L. Timberman

Title: Senior Transmission Account Executive



Rec'd via fedex 9/21/00 12:46pm mo

12. **Assignment.** This Consent Agreement is binding on any successors and assigns of the Parties. Neither Party may further transfer or assign the rights and obligations under the Assignment Agreement or this Consent Agreement, in whole or in part, without the written consent of the other Party to the Assignment Agreement and the Consenting Party, which consent shall not be unreasonably withheld.

IN WITNESS WHEREOF, the Parties have executed this Consent Agreement as of the date first above written.

**Assignor:**

**THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT**

By: \_\_\_\_\_

Name: Jorge Carrasco

Title: Superintendent

**Assignee:**

**EDF TRADING NORTH AMERICA, LLC**

By:  

Name: Russell Schneider

Title: Vice President

**Consenting Party:**

**UNITED STATES OF AMERICA**

**Department of Energy**

**Bonneville Power Administration**

By: 

Name: Toni L. Timberman

Title: Senior Transmission Account Executive

Rec'd via FedEx 9/2/10 @ 12:46pm mo

**Pacific Northwest AC Intertie Capacity**

**Assignment Agreement**

**between**

**The City of Seattle, by and through its City Light Department**

**and**

**EDF Trading North America, LLC**

15107  
and

94522

This Assignment Agreement ("**Assignment Agreement**"), is made and entered into this 31<sup>st</sup> day of August 2010, ("**Execution Date**") by and among The City of Seattle, a Washington municipal corporation, acting by and through its City Light Department with offices at 700 Fifth Ave., Seattle, WA 98104, ("**City Light**" or "**Assignor**"), and EDF Trading North America, LLC ("**Assignee**") with offices at 4700 W. Sam Houston Pkwy N., Suite 250, Houston, TX 77041. Assignee and City Light are sometimes individually referred to in this Assignment Agreement individually as "**Party**" and together as "**Parties**".

**RECITALS**

WHEREAS, City Light holds Capacity Ownership Rights to certain transmission capacity on the Pacific Northwest AC Intertie ("**PACI**") under its PNW AC Intertie Capacity Ownership Agreement with the Bonneville Power Administration dated September 27, 1994 ("**COA**"); and

WHEREAS, City Light is interested in partially assigning certain transmission capacity available under its COA for a limited term; and

WHEREAS, in accordance with Section 6 of the COA, City Light may, with the consent of Bonneville Power Administration, assign all or a portion of its Capacity Ownership Share and associated rights and obligations pursuant to the COA; and

WHEREAS, Assignee desires to obtain transmission capacity through a partial assignment of City Light's Capacity Ownership Share under the COA, and City Light desires to assign to Assignee a portion of its transmission capacity under the COA for a

period of five years and on the terms and conditions set forth in this Assignment Agreement.

NOW, THEREFORE, in consideration of the mutual agreements, covenants and conditions herein contained, the Parties agree as follows:

## **ARTICLE 1 DEFINITIONS**

As used in this Assignment Agreement, the following terms shall have the meanings set forth below. Certain other capitalized terms are defined where they appear in this Assignment Agreement. Capitalized terms used but not defined in this Assignment Agreement shall have the meaning set forth in the COA, BPA Tariff or BPA Business Practices as the case may be.

**"Affiliate"** means with respect to any Person, each Person that directly or indirectly, controls or is controlled by or is under common control with such designated Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities or by contract or otherwise.

**"Assignee"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Assignee's Capacity Percentage"** means 2.087%. See Exhibit C for the table that identifies the assignee's capacity percentage as the ratio of the Assignee's Capacity Share, in MW north-to-south, to BPA's 3,450 MW PACI Rated Transfer Capability.

**"Assignee's Capacity Share"** means 72 MW north-to-south and 55 MW south-to-north and certain rights and obligations pursuant to the COA as specified in Section 3.2 of this Assignment Agreement.

**"Assignee's Scheduling Percentage"** is 1.5%, which means the Assignee's Capacity Share divided by the PNW AC Intertie Rated Transfer Capability.

**"Assignee's Scheduling Share"** means, for any given hour, the MW amount equal to the product of Assignee's Scheduling Percentage and the PNW AC Intertie

Operational Transfer Capability for such hour. At full north-to-south capacity of 4,800 MW, Assignee's Scheduling Share will be equal to 72 MW (4800 \* 1.5/100).

**"Assignment Agreement"** has the meaning set forth in the Preamble.

**"Assignor"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Balancing Authority"** means the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time. For purposes of this definition, the word "Interconnection" shall mean any one of the three major electric system networks in North America; Eastern, Western, and ERCOT.

**"Balancing Authority Area"** means the collection of generation, transmission and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**"Bonneville Power Administration", "BPA" or "Bonneville"** means the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION.

**"BPA Business Practices"** refers to the policies and procedures set forth for doing business with BPA as amended from time to time and published by BPA in their Open Access Same Time Information System (OASIS).

**"BPA Tariff"** means BPA's Open Access Transmission Tariff in effect at the relevant time during the Term.

**"Business Day"** means any day other than Saturday, Sunday, or a legal public holiday as designed in Article 6103 of Title 5, U.S. Code or by Executive Order or federal statute or in accordance with WECC practice and variations as identified in the WECC prescheduling calendar.

**"Calendar Month"** means a month during the Term of this Assignment Agreement commencing at 0000 hours PPT on the first day of the month and ending at 2400 hours PPT on the last day of the month.

**"Capacity Owner"** has the meaning set forth in Section 1 of the COA.

**"Capacity Ownership Agreement" or "COA"** has the meaning set forth in the Recitals to this Agreement.

**"Capacity Ownership Rights"** has the meaning set forth in Section 1 of the COA.

**"Capacity Ownership Share"** has the meaning set forth in Section 1 of the COA.

**"City Light"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Commencement Time"** has the meaning set forth in Section 2.1.

**"Committee"** has the meaning set forth in Section 1 of the COA.

**"Consent Agreement"** has the meaning set forth in Section 2.2.

**"Credit Support"** means any of the following: a bond, Letter of Credit, guarantee or other reasonable and commercially priced security, in an amount as reasonably determined by City Light, and in a form and from a source approved by City Light.

**"Defaulting Party"** has the meaning set forth in Section 7.1.

**"Event of Default"** has the meaning set forth in Section 7.1.

**"Execution Date"** has the meaning set forth in the Preamble.

**"Interest Rate"** means, on any date, the per annum rate of interest equal to the Prime Rate plus two percent (2%) provided that the Interest Rate shall never exceed the maximum rate permitted by applicable law.

**"Letter of Credit"** means an irrevocable, transferable, standby letter of credit, reasonably acceptable in form and substance to the beneficiary thereof, which letter of credit is issued by a Qualified Institution.

**"Material Adverse Change"** means any effect, change, occurrence, development, condition or event that, individually or in the aggregate, has had or would reasonably be expected to have a material adverse effect (financial or otherwise) on Assignee's business, taken as a whole; provided that the following shall not be considered when determining whether a Material Adverse Change has occurred: any effect resulting from (a) any materially adverse change in economic conditions in the industry within the WECC region; (b) any materially adverse change in currency rates; (c) any materially adverse change in any laws or accounting rules generally applicable to similarly situated Persons; (d) any materially adverse change resulting from changes in the international, national, regional or local wholesale or retail gas or power markets, and renewable energy or emissions markets; (e) the commencement, occurrence or

intensification of any war, sabotage or armed hostilities; (f) acts of terrorism; or (g) any materially adverse change in Assignee's business which is cured (including by payment of money) before Assignor requests additional Credit Support.

**"Non-Defaulting Party"** has the meaning set forth in Section 7.1(a).

**"PACI"** has the meaning set forth in the Recitals.

**"Parties"** has the meaning set forth in the Preamble to this Assignment Agreement.

**"Payment Due Date"** has the meaning set forth in Section 5.2.

**"Pacific Prevailing Time"** means the prevailing time (i.e., Standard Time or Daylight Savings Time) on any given day in the Pacific Time Zone.

**"Person"** means any natural person, sole proprietorship, partnership, corporation, limited liability company, trust, joint venture, any governmental authority or any incorporated or unincorporated entity or association of any nature.

**"PNW AC Intertie Rated Transfer Capability"** means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.

**"Point of Delivery"** or **"POD"** has the meaning set forth in Section 3.1.

**"Point of Receipt"** or **"POR"** has the meaning set forth in Section 3.1.

**"PPT"** means Pacific Prevailing Time.

**"Preschedule"** means the schedule submitted by the Assignee pursuant to paragraph 3.2(c)(ii)(A) for transactions prepared each Business Day for the period beginning 2400 hours of the current Business Day through 2400 hours of the next Business Day.

**"Prime Rate"** means the rate published in *The Wall Street Journal* under "Money Rates," as the "Prime Rate" from time to time (or, if more than one rate is published, the arithmetic mean of such rates), in either case determined as of the date the obligation to pay interest arises, but in no event more than the maximum rate permitted by Applicable Law.

**"Prudent Utility Practice"** has the meaning set forth in Section 1 of the COA.

**"Qualified Institution"** means a major U.S. commercial bank or a U.S. branch office of a foreign bank, in either case having (i) assets of at least USD \$10 billion and (ii) a Credit Rating from one or more of S&P, Moody's and Fitch, which Credit Rating is at least "A-" from S&P (in the event that such bank has a Credit Rating from S&P), "A3" from Moody's (in the event that such bank has a Credit Rating from Moody's) and "A-" from Fitch (in the event that such bank has a Credit Rating from Fitch).

**"Real Power Losses"** means energy lost during transmission of power caused by the electrical resistance of high-voltage transmission lines.

**"Real-time Schedule"** means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by Assignee.

**"Term"** has the meaning set forth in Section 2.1.

**"Termination Time"** has the meaning set forth in Section 2.1.

**"USD"** means United States Dollars.

## **ARTICLE 2**

### **TERM AND TERMINATION**

**2.1 Term and Termination.** Subject to Section 3.4, the **"Term"** shall commence at 0000 hours on November 1, 2010 (**"Commencement Time"**) and shall terminate at 2400 hours on October 31, 2015 (**"Termination Time"**) All times are PPT. In the event that the COA terminates prior to the Termination Time, this Assignment Agreement shall also terminate coincidentally with the termination of the COA, *provided, however* that if an Event of Default as set forth in Section 7.1(e) causes the termination of the COA, Assignee shall be entitled to a Termination Payment pursuant to section 7.2. Upon termination or expiration of this Assignment Agreement, all accrued liabilities shall survive until satisfied.

**2.2 Conditions Precedent.** This Assignment Agreement is conditional upon and shall not take effect or be enforceable against either Party until (1) confirmation by BPA through execution by BPA of a separate agreement consenting to the partial assignment to the Assignee of the Assignee's Capacity Share and the terms and

conditions of this Assignment Agreement, (the "Consent Agreement") and (2) BPA has completed all necessary scheduling system changes necessary to implement this Assignment Agreement.

### **ARTICLE 3**

#### **ASSIGNMENT OF CAPACITY OWNERSHIP SHARE**

**3.1 Product.** In accordance with the COA and this Assignment Agreement, City Light shall assign and transfer to the Assignee the Assignee's Capacity Share for the Term of this Assignment Agreement. Assignee shall have the right under this Assignment Agreement during any hour of the Term to schedule Assignee's energy up to the Assignee's Scheduling Share.

(a) The "Point of Receipt" or "POR" and "Point of Delivery" or "POD" shall be

(i) South-to-north (1) POR at the California-Oregon border, Captain Jack or Malin substations, and (2) POD at the Washington-Oregon border, John Day substation; and

(ii) North-to-south (1) POR at the Washington-Oregon border, John Day substation, and (2) POD at the California-Oregon border at Captain Jack or Malin substations.

#### **3.2 Assignee's Capacity Share Rights and Obligations.**

(a) During the Term, Assignee shall be entitled to use the Assignee's Capacity Percentage in any manner that is permitted under this Assignment Agreement and is consistent with both the COA and BPA Business Practices.

(b) **No Third Party Wheeling.**

(i) Except as expressly provided in subparagraph 3.2(b)(ii), Assignee shall not use its Assignee's Scheduling Share to transmit power or energy (except for inadvertent power flows) that Assignee does not own at the California-Oregon border or for which transmission Assignee receives any revenue that would be reportable in Assignee's accounting system where revenues received for wheeling for other entities would be booked.



(ii) If Assignee's Scheduling Share is not fully utilized by Assignee in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions, over the unused portion of Assignee's Scheduling Share for such hour but no longer than such hour. Assignee shall not be compensated for Bonneville's usage of any unused portion of Assignee's Scheduling Share. For purposes of this subparagraph 3.2(b)(ii), Assignee's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Assignee has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour for any MW amount of the Assignee's Scheduling Share.

(c) **Scheduling.**

(i) Assignee (and only Assignee) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Assignee's Scheduling Share for such hour. The MW amount of Assignee's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Assignee's north-to-south schedules and south-to-north schedules (net schedules) for such hour.

(ii) Assignee shall submit all schedules of Assignee's Scheduling Share on its own behalf in accordance with the procedures set forth in applicable interchange scheduling standards and BPA Business Practices with specific procedures and exceptions described in paragraphs 3.2(c)(ii)(A) and 3.2(c)(ii)(B). Such procedures may be varied by the mutual agreement of BPA and Assignee's schedulers. Such mutual agreement may, but need not, be written.

(A) **Preschedules.**

(1) **Assignee** shall submit its Preschedule by e-Tag in accordance with the provisions of the BPA Scheduling Transmission Service Business Practice.

(B) **Real-time Scheduling.** Real-time Schedules shall be submitted by e-Tag in accordance with the provisions of the BPA Scheduling Transmission Service Business Practice for scheduling transmission service or its successor.

(d) **Real Power Losses and Transmission Loss Factor.** Assignee shall be responsible for returning (or arranging for the return of) Real Power Losses to BPA associated with use of Assignee's Scheduling Share during the Term in a manner consistent with applicable BPA requirements. Assignee shall return losses, at its sole cost and expense, and in accordance with Exhibit E of the COA, Item A. Currently, the transmission loss factor is 2.5%, but can change pursuant to the terms of the COA.

### **3.3 City Light Rights and Obligations.**

(a) City Light shall request BPA provide Assignee any information not otherwise publicly available regarding changes to the PACI that would increase or decrease the Assignee's Scheduling Share

(b) In the event, pursuant to Section 7(b) of the COA, City Light is notified by BPA of a change in the PNW AC Intertie Rated Transfer Capability or a substantial change in the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability not otherwise publicly available, City Light shall promptly notify Assignee of such adjustment.

(c) City Light shall make commercially reasonable, good faith efforts to persuade BPA to give fair consideration to Assignee's interests under Section 7(a) and 7(e) of the COA to the extent such interests have been expressed to BPA in writing.

(d) City Light will provide Assignee with the results of any BPA review under Section 13(c)(10) of the COA that results in a revision to the transmission loss factor in Exhibit E, Part A including any additional information provided to City Light by BPA that is pertinent to such review and the results of any arbitration should arbitration be pursued.

(e) City Light retains all rights and responsibilities with respect to the Capacity Owner's Committee under the COA.

(f) Upon execution of this Assignment Agreement, City Light shall provide, within 10 days, written notice to BPA of the assignment.

## **ARTICLE 4 PRICE, CREDIT**

**4.1 Payment Obligations:** During the Term Assignee shall be responsible for the following payment obligations associated with the Assignee's Capacity Share:

(a) **To City Light:** the Price for the Assignee's Capacity Share as shown in Exhibit A, and

(b) **To BPA:** any applicable ancillary services charges except those defined in or set forth on Schedule 1 (Scheduling, System Control and Dispatch Service as defined or similarly described in the BPA Tariff) and Schedule 2 (Reactive Supply and Voltage Control from Generation or Other Sources Service as defined or similarly described in the BPA Tariff) of the BPA Tariff, which will be paid by City Light.

**4.2 Credit Support.**

(a) During the Term, if there is any Material Adverse Change affecting Assignee, City Light, in its discretion, may require Assignee to provide Credit Support sufficient to assure that Assignee will continue to meet its current contractual obligations under this Assignment Agreement and its contractual obligations for the next twelve (12) Months from the date of the demand for Credit Support (or if the remaining Term of this Assignment Agreement is less than twelve (12) Months, for the remaining Term of this Assignment Agreement). Should Assignee be unable to provide the necessary Credit Support, Assignee shall require that EDF Trading Limited, Assignee's indirect parent corporation, shall provide the necessary Credit Support.

(b) Following a demand for Credit Support and until such time as Assignee is no longer experiencing or affected by a Material Adverse Change, Assignee or EDF Trading Limited, whichever the case may be, shall maintain satisfactory Credit Support on an ongoing, rolling basis sufficient to assure its current contractual obligations and its contractual obligations for the following twelve (12) Months. At the request of either Party, Credit Support shall be increased or decreased as appropriate once per calendar month such that the party providing Credit Support will be able to meet its then-current contractual obligations and its future contractual obligations under this Assignment Agreement for the next twelve (12) month period (or if the remaining Term of this Assignment Agreement is less than twelve (12) months, for the remaining Term of this Assignment Agreement).

(c) If Assignee or EDF Trading Limited fails to provide such Credit Support within ten (10) Days of a request for Credit Support or fails to maintain Credit Support as set forth above, City Light may suspend its performance under this Assignment Agreement until such Credit Support is posted or may treat the failure to provide Credit Support as a default and exercise its rights under Article 7 of this Assignment Agreement.

(d) At City Light's written request, Assignee or EDF Trading Limited shall furnish the City Light financial information as may be reasonably required to confirm that Assignee or EDF Trading Limited has not been affected by a Material Adverse Change.

## **ARTICLE 5**

### **BILLING AND PAYMENT**

**5.1 Monthly Billing.** No later than the tenth (10<sup>th</sup>) Day of each calendar month during the Term, City Light shall deliver to Assignee an invoice setting forth the total amount due for the purchase by Assignee of Assignee's Capacity Share for the immediately preceding month as described in Exhibit A.

**5.2 Payments to City Light.** Assignee shall pay the amount specified in the bill to City Light by electronic wire transfer of immediately available funds by the later of ten (10) Days after Assignee's receipt of City Light's invoice or the twentieth (20<sup>th</sup>) Day of the month in accordance with the wire transfer instructions set out in **Exhibit B, Contact Information**, as it may be changed from time to time; *provided, however*, that any changes to such wire transfer instructions shall not be effective until five (5) Business Days after the date on which notice of the change is sent to Assignee and if the due date is not a Business Day, Assignee shall pay the monthly bill on the Business Day following such due date ("**Payment Due Date**"). If Assignee fails to pay an amount when due, it will pay City Light interest on the unpaid balance at the Interest Rate from the Payment Due Date until payment in full.

## **ARTICLE 6**

### **NOTICES; CONTACTS**

6.1 All notices, requests, statements or payments from one Party to the other Party shall be made to the addresses specified in Exhibit B. All notices, requests, or statements from one Party to the other Party shall be made in writing. Notices required to be in writing shall be delivered by the United States Postal Service, hand delivery, overnight delivery, facsimile or e-mail. Notice from one Party to the other Party by facsimile shall (where confirmation of successful transmission is received) be deemed to have been received on the day on which it was transmitted (unless transmitted after 5:00 p.m. at the place of receipt or on a day that is not a Business Day, in which case it shall be deemed received on the next Business Day). Notice from one Party to the other Party by hand delivery or overnight delivery shall be deemed to have been received when delivered. Notices sent by e-mail must be confirmed by e-mail as received by the receiving Party. A Party may change its address by providing notice of the same in accordance herewith.

## **ARTICLE 7**

### **EVENT OF DEFAULT**

7.1 An **"Event of Default"** means with respect to a Party (the **"Defaulting Party"**):

(a) the failure by the Defaulting Party to make, when due, any payment required pursuant to this Assignment Agreement or the COA if such failure is not remedied within 2 Business Days after written notice of such failure is given to the Defaulting Party by the other Party (the **"Non-Defaulting Party"**);

(b) the failure by the Defaulting Party to provide or maintain Credit Support in accordance with the requirements of Section 4.2;

(c) the material breach of any other of the material covenants, terms or conditions of this Assignment Agreement or the COA, where such breach is not remedied within 10 days of written notice of such breach by the Non-Defaulting Party;

(d) the institution, with respect to the Defaulting Party (or any guarantor thereof), by the Defaulting Party (or any guarantor thereof) or by another Person, of a bankruptcy, reorganization, moratorium, liquidation or similar insolvency proceeding or other relief under any bankruptcy or insolvency law affecting creditors'

rights, or the presentation or institution of a petition for the winding-up or liquidation of the Defaulting Party; or

(e) the termination of the COA as a result of circumstances within SCL's reasonable control without Assignee's consent, which in all cases will be deemed to be an Event of Default with respect to Assignor.

**7.2 Rights Upon Event of Default; Termination Payment.** If an Event of Default occurs, the Non-Defaulting Party shall have the right to terminate this Assignment Agreement upon notice to the Defaulting Party, such notice of termination to be effective immediately upon receipt ("**Termination Date**").

(a) If City Light is the Defaulting Party, City Light will pay to Assignee (in addition to any other amounts which may be due from City Light to Assignee) within 10 Business Days after the Termination Date of this Agreement, as a termination payment with respect to this Assignment Agreement, the amount, if any, by which (i) the aggregate amount that Assignee, acting in a commercially reasonable manner, pays or, using its commercially reasonable efforts, would have paid to replace Assignee's Capacity Share for the period between the Termination Date and the Termination Time, exceeds (ii) the aggregate Price that Assignee would have paid in respect of the same such period pursuant to this Assignment Agreement if the Event of Default had not occurred (prorated for any partial Calendar Month on the basis of the number of days in such Calendar Month).

(b) If Assignee is the Defaulting Party, Assignee will pay to City Light (in addition to any other amounts which may be due from Assignee to City Light) within 10 Business Days after the Termination Date, as a termination payment with respect to the Assignee's Capacity Share, an amount equal to the positive difference, if any, obtained by subtracting (xx) the aggregate amount that City Light obtains or, using its commercially reasonable efforts, could have obtained for the Assignee's Capacity Share for the period between the Termination Date and the Termination Time from (yy) the aggregate Price that Assignee would have paid for each Calendar Month (or portion thereof) during that same period pursuant to this Assignment Agreement (prorated for any partial Calendar Month on the basis of the number of days in such Calendar Month).

**7.3 Rights upon Termination of COA.** If the COA terminates for a reason other than that set forth in Section 7.1(e) above, and if Assignor decides in its sole

discretion to pursue claims, and thereafter receives any damages or other compensation in connection with such termination from BPA, Assignor shall pay Assignee its proportionate share of such damages or other compensation, such proportion to be calculated by dividing Assignee's Capacity Share by Assignor's Capacity Ownership Share and factoring in the Assignee's limited duration of rights and obligations.

**7.4 Survival of Liability.** In no event shall termination of this Assignment Agreement for any reason relieve either Party of any liability for any amounts due or payable to the other Party with respect to any period prior to such termination.

## **ARTICLE 8**

### **REPRESENTATIONS AND WARRANTIES; ADDITIONAL COVENANTS**

**8.1 Representations and Warranties of the Parties.** Each Party represents and warrants to the other Party as of the Execution Date as follows:

(a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation, is duly qualified to do business in those jurisdictions in which it is necessary for the conduct of its business and to enter into and perform the transactions contemplated by this Assignment Agreement and the Consent Agreement, except for failures which in the aggregate are not material to the other Parties, and has all requisite corporate or other similar power and authority and the legal right to own and operate its properties and to conduct its business as currently conducted;

(b) the execution, delivery and performance of this Assignment Agreement and the Consent Agreement and the consummation by it of the transactions contemplated hereby and thereby (i) are within its organizational powers and have been or will be duly authorized by all necessary action, and (ii) do not and will not, with the passing of time or giving of notice or both, violate or conflict with its articles or certificate of incorporation, by-laws or comparable constitutive or governing documents as currently composed, any law applicable to it, any order or judgment of any governmental authority applicable to it or any agreement to which it is a party or by which it is bound, nor will it result in the breach, default or termination of any agreement to which it is a party; and

(c) this Assignment Agreement and the Consent Agreement have been duly executed and delivered and constitute a legal, valid and binding obligation of such Party enforceable against such Party in accordance with its terms, except as such enforceability may be limited by Seattle Municipal Code 5.24.005, bankruptcy, insolvency or similar laws affecting the rights of creditors generally, and with regard to equitable remedies, to equitable defenses and the discretion of the court before which proceedings to obtain such remedies may be pending.

(d) except for Assignor's challenge to the Oregon Department of Revenue's tax assessment case (The City of Seattle, et. al. v. Oregon Department of Revenue, Oregon Tax Court No. TC-4946), there is no suit, action, claim, arbitration, proceeding or investigation pending or, to its knowledge, threatened against such Party before any governmental entity that relates to or involves it, or the COA;

(e) it understands and agrees that no Party is acting as a fiduciary, advisor or agent to any other Party with respect to this Consent Agreement or the transactions contemplated hereby; and

(f) no petition or notice has been presented, no order has been presented, no order has been made and no resolution has been passed for its bankruptcy, liquidation, winding-up or dissolution, and no receiver, trustee, custodian or similar fiduciary has been appointed over the whole or any part of any of its assets or income, and it has not received any notice that any other person has any plan or intention of, filing, making or obtaining any such petition, notice, order or resolution or of seeking the appointment of a receiver, trustee, custodian or similar fiduciary.

## **8.2 Additional Representations and Warranties and Covenants of City Light.**

- (a) City Light represents and warrants to Assignee that
- (i) it is currently a party to the COA and has a Capacity Ownership Share under the COA;
  - (ii) it has the right and power pursuant to City of Seattle Ordinance 123276, subject to BPA approval, to assign all or a part of its Capacity Ownership Share to Assignee on the terms and subject to the conditions set forth in this Assignment Agreement;



- (iii) the COA is in full force and effect and has been duly authorized, executed and delivered by it, and constitutes a legal, valid, binding and enforceable agreement as to it;
- (iv) this Assignment Agreement and the Consent Agreement will not affect the validity of the COA, which will continue to be legal, valid, binding, enforceable and in full force and effect on substantially identical terms following the consummation of the transactions contemplated hereby;
- (v) it is not in breach of or in default under the COA, and it has no knowledge of an event that has occurred which with the passage of time or giving of notice or both would constitute such a default, result in a loss of rights or permit termination, modification or acceleration under, or result in the creation of any lien under the COA (except for Assignor's challenge to the Oregon Department of Revenue's tax assessment case (The City of Seattle, et. al. v. Oregon Department of Revenue, Oregon Tax Court No. TC-4946)) and no such event, condition or circumstance would occur or exist as a result of it entering into or performing its obligations under this Assignment Agreement or the Consent Agreement. It has no knowledge of any state of facts or condition that exists (i) that is or may be reasonably likely to be materially adverse to the rights or obligations of it under the COA or (ii) that is or would reasonably be expected to prevent the performance by it of any of its obligations hereunder or under the COA or the consummation of the transactions contemplated by this Assignment Agreement or the Consent Agreement;
- (vi) it has not entered into any written or oral amendments, supplements, or other modifications of the COA, except as described in the definition of "COA" set forth in the Consent Agreement;

- (vii) no amounts currently due under the COA are delinquent;
- (viii) no party to the COA has provided notice to it that it has repudiated, canceled, suspended, terminated or made any threat to cancel, suspend or otherwise terminate any provision thereof and to its knowledge, no such party is in or subject to a bankruptcy or insolvency proceeding; and
- (ix) there are no disputes, oral agreements or forbearance programs between Consenting Party and Assignor in effect as to the COA.

(b) City Light covenants and agrees that, in connection with this Assignment Agreement, it will comply with all applicable laws, codes, rules, regulations and the terms and conditions of the BPA Business Practices in effect at the applicable time, the COA and the Assignment Agreement, as well as any BPA requirements for the partial assignment of City Light's Capacity Ownership Share to the Assignee.

(c) City Light covenants and agrees that it will take no actions during the Term that would impair, limit or reduce the Assignee's Capacity Share or that would prevent, impair the rights associated with the Assignee's Capacity Share or prevent or limit the right and ability of Assignee to fully use it's Assignee's Capacity Share for its own account and benefit during the Term and subject to the conditions of this Assignment Agreement, provided, however that Assignee is not in breach of this Assignment Agreement.

### **8.3 Additional Covenants of Assignee.**

(a) Assignee covenants and agrees that it will at all times during the Assignment Term be and remain an Eligible Customer under the BPA Tariff.

(b) Assignee covenants and agrees that under and in connection with this Assignment Agreement, including any use by Assignee of the Assignee's Capacity Share, it shall comply with all applicable laws, codes, rules, regulations and the terms and conditions of this Assignment Agreement and the BPA Business Practices in effect at the applicable time and shall act in good faith and take no intentional actions that would impair any rights associated with the Assignee's Capacity Share, City Light's Capacity Ownership Share and the COA.

(c) Assignee covenants and agrees that it shall abide by the provisions of the COA to the extent such obligations are assigned to Assignee under this Assignment Agreement and the Consent Agreement as well as any BPA requirements for the partial assignment of City Light's Capacity Ownership Share to the Assignee.

(d) Assignee covenants and agrees that it shall take no actions that would prevent or limit the right and ability of City Light to fully use the Assignee's Capacity Share for City Light's own account and benefit after the Termination Time or expiration of this Assignment Agreement.

## **ARTICLE 9**

### **INDEMNITY OBLIGATIONS**

**9.1 Assignee** shall defend, indemnify and hold harmless City Light and its officers, partners, directors, members, managers, employees, agents, affiliates and representatives from any liabilities, damages, or penalties, including all related costs and expenses (including attorneys' fees), arising out of or resulting from Assignee's actions or inactions in the use of the Assignee's Capacity Share.

**9.2 City Light** shall defend, indemnify and hold harmless Assignee and its officers, partners, directors, members, managers, employees, agents, affiliates and representatives from any liabilities, damages, or penalties, including all related costs and expenses (including attorneys' fees), directly resulting from City Light's breach of any covenants in Section 8.2.

## **ARTICLE 10**

### **LIMITATION ON LIABILITY**

THE PARTIES ACKNOWLEDGE AND AGREE THAT NOTWITHSTANDING ANYTHING IN THIS AGREEMENT, NO PARTY SHALL BE LIABLE TO THE OTHER PARTIES FOR CONSEQUENTIAL OR INDIRECT LOSS OR DAMAGES OR ANY PUNITIVE, SPECIAL, INCIDENTAL OR EXEMPLARY DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE.

## **ARTICLE 11**

### **MISCELLANEOUS**

**11.1. Currency.** All dollar amounts in this Assignment Agreement are referred to in U.S. dollars and all invoices and payments shall be in U.S. currency.

**11.2. Assignment.** Neither Party may further transfer or assign the rights and obligations under this Assignment Agreement of the Consent Agreement, in whole or in part, without the written consent of the other Party and BPA, which consent shall not be unreasonably withheld.

**11.3. Entire Agreement.** This Assignment Agreement, the attachments thereto and the Consent Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof. There are no prior or contemporaneous agreements or representations affecting the same subject matter other than those herein expressed. Except for any matters which, in accordance with the express provisions of this Assignment Agreement, may be resolved by oral agreement between the Parties, no amendment, modification or change herein shall be enforceable unless reduced to writing and executed by both Parties.

**11.4. Enurement.** This Assignment Agreement shall enure to the benefit of and be binding on the Parties and their respective successors and permitted assigns.

**11.5. Governing Law and Venue.** This Assignment Agreement shall be governed by and construed in accordance with the laws of the State of Washington, without regard to conflict of laws principles to the contrary. The Parties each irrevocably consents to the exclusive jurisdiction and venue of the Superior Courts of King County, Washington.

**11.6. No Waiver.** Except as otherwise provided herein or as agreed by the Parties, no provision of this Assignment Agreement shall be waived except in writing. Any waiver at any time by a Party of its rights with respect to a default under this Assignment Agreement, or any other matter arising in connection with this Assignment Agreement, shall not be deemed a waiver with respect to any other default or matter.

**11.7. Survival Arrangements.** All confidentiality and indemnity rights, all rights of a Party with respect to misrepresentations or breaches of covenants arising prior to any expiration or termination of this Assignment Agreement, and all obligations provided in this Assignment Agreement shall remain in effect for the purpose of compliance with such obligations, unless otherwise provided herein. Without limiting the generality of the foregoing, any obligation to pay any amount due, or any accrued or eligible liability, arising from or as a result of the application of this Assignment Agreement shall survive termination of this Assignment Agreement.

**11.8. No Third-Party Beneficiaries.** This Assignment Agreement is for the benefit of, and shall be enforceable by, the Parties only. This Assignment Agreement is not intended to confer any right or benefit on any third party. No action may be commenced or prosecuted against a Party by any third party claiming as a third-party beneficiary of this Assignment Agreement or any of the transactions contemplated by this Assignment Agreement.

**11.9. Relationship of the Parties.** City Light and Assignee agree that nothing contained in this Assignment Agreement shall be construed to create an association, partnership, trust, joint venture or agency relationship between or City Light and Assignee, or to impose a trust or partnership covenant, obligation or liability on or with regard to either Party. Each Party shall be individually and severally liable for its own obligations hereunder.

**11.10. Counterparts.** This Assignment Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Executed counterparts may be exchanged by fax as evidence of execution and delivery.

**11.11. Time of Essence.** Time is of the essence of this Assignment Agreement.

IN WITNESS WHEREOF, each Party has caused this Assignment Agreement to be executed by its duly authorized representative as of the date first written above.

**EDF Trading North America, LLC**

**THE CITY OF SEATTLE, WASHINGTON  
CITY LIGHT DEPARTMENT**

By:  \_\_\_\_\_

By: \_\_\_\_\_

Name: Russell Schneider

Name: Jorge Carrasco

Title: Vice President

Title: Superintendent

Date: 09-01-2010

Date: \_\_\_\_\_

IN WITNESS WHEREOF, each Party has caused this Assignment Agreement to be executed by its duly authorized representative as of the date first written above.

**EDF Trading North America, LLC**

**THE CITY OF SEATTLE, WASHINGTON  
CITY LIGHT DEPARTMENT**

By: \_\_\_\_\_

By: Jorge Carrasco

Name: \_\_\_\_\_

Name: Jorge Carrasco

Title: \_\_\_\_\_

Title: Superintendent

Date: \_\_\_\_\_

Date: 8-31-10

**EXHIBIT A  
PRICE INFORMATION**

**\$ 160,000.00 per month (the "Price").**



**EXHIBIT B  
CONTACT INFORMATION**

**DATE: AUGUST 31<sup>st</sup>, 2010**

**PAGE 1 OF 1**

<p><b>Name: EDF TRADING NORTH AMERICA, LLC</b></p> <p><b><u>All Notices (except invoices):</u></b></p> <p>4700 W. Sam Houston Pkwy N., Suite 250 Houston, TX 77041 Attn: Contract Administration Phone: 281-781-0333 Facsimile: 281-653-1454 Email: <a href="mailto:contract_admin@edftrading.com">contract_admin@edftrading.com</a></p> <p><b><u>Invoices:</u></b></p> <p>Same address as above Attn: Power Accounting Phone: 281.653.1683 Facsimile: 281.653.1033</p>	<p><b>Name: CITY LIGHT</b></p> <p><b><u>All Notices:</u></b></p> <p><b><u>Mailing Address</u></b> City Light Attn: Robin Cross PO Box 34023, Suite 3200 Seattle, WA 98124-4023</p> <p><b><u>Or, if by overnight mail</u></b> City Light Attn: Robin Cross 700 Fifth Avenue, Suite 3200 Seattle, WA 98104 Phone: 206-684-3392</p> <p><b><u>Or, if by fax or e-mail</u></b></p> <p>Facsimile: 206-386-4555 Email: <a href="mailto:robin.cross@seattle.gov">robin.cross@seattle.gov</a></p>
<p><b>Contact Information Modification:</b> Any modifications to the Contact Information shall be provided to the other Party in writing and shall be mailed, faxed or e-mailed.</p>	

**EXHIBIT C**  
**ASSIGNEE'S CAPACITY PERCENTAGE**

	Capacity	Capacity	% ownership
<b>BPA</b>			
<b>sold to</b>	<b>3450</b>		
<b>Puget</b>		<b>400</b>	<b>11.59420</b>
<b>Seattle</b>		<b>160</b>	<b>4.63768</b>
<b>Seattle to EDF</b>		<b>72</b>	<b>2.08696</b>
<b>PNGC</b>		<b>50</b>	<b>1.44928</b>
<b>Tacoma</b>		<b>41</b>	<b>1.18841</b>
<b>Snohomish</b>		<b>42</b>	<b>1.21739</b>
<b>PacifiCorp</b>		<b>32</b>	<b>0.92754</b>
<b>Total Sold</b>		<b>725</b>	<b>21.01449</b>
<b>Portland's PNW AC</b>	<b>950</b>		
<b>PacifiCorp's PNW AC</b>	<b>400</b>		
<b>Total Rated Transfer Capability</b>	<b>4800</b>		

**Scheduling Percentage = Capacity ownership Share / PNW AC Intertie Rated Transfer Capability**

As defined in Exhibit C

<b>Seattle's Scheduling Percentage</b>	<b>3.33333</b>
<b>EDF Scheduling Percentage</b>	<b>1.5</b>

Contract Number: 13ZZ-15826

**CONSENT AGREEMENT**

**executed by**

**THE UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

**acting by and through the**

**BONNEVILLE POWER ADMINISTRATION**

**and**

**THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT**

**and**

**EDF TRADING NORTH AMERICA, LLC**

**and**

**SOUTHERN CALIFORNIA EDISON COMPANY**

THIS CONSENT AGREEMENT (Consent Agreement) is made and entered into this 31 day of January, 2013 (Effective Date) by and among the City of Seattle, by and through its City Light Department (SCL), EDF Trading North America, LLC (Assignor), Southern California Edison Company (Assignee) and the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (BPA) (SCL, Assignor, Assignee and BPA are sometimes individually referred in this Consent Agreement as a "Party" and collectively as the "Parties").

WHEREAS, SCL and BPA are parties to the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94522, dated as of September 27, 1994, together with any and all amendments thereto (the COA);

WHEREAS, Assignor and SCL have entered into that certain Assignment Agreement, dated as of August 31, 2010, whereby, Assignor has assumed a partial assignment of the SCL's rights and obligations in the COA (First Assignment Agreement);

WHEREAS, Section 6 of the COA required that SCL obtain BPA's prior written consent to assign or transfer any of its rights, duties and obligations under the COA. Assignor and SCL obtained such written consent, and BPA granted such consent in that certain Consent Agreement among BPA, SCL and Assignor, dated August 31, 2010 (First Consent Agreement);

WHEREAS, Assignee and Assignor have entered (a) that certain Second Amended and Restated Transmission Resale Confirmation, dated January ~~28~~, 2013, for the Delivery Period 02/01/2013/0000 through 12/31/2013/2400 governed by that certain Transmission Resale Enabling Agreement between Assignor and Assignee, effective November 6, 2012 (Master Agreement) (First Resale), (b) that certain Amended and Restated Transmission Resale Confirmation, dated January ~~28~~, 2013, for the Delivery Period 01/01/2014/0000 through 12/31/2014/2400 governed by the Master Agreement (Second Resale) and (c) that certain Amended and Restated Transmission Resale Confirmation, dated January ~~28~~, 2013, for the Delivery Period 07/01/2015/0000 through 9/30/2015/2400 governed by the Master Agreement (Third Resale and together with the First Resale and the Second Resale, the Second Assignment Agreements), each of which may be fulfilled by assigning certain transmission rights and obligations that are the subject of the First Assignment Agreement; and

WHEREAS, Section 12 of the First Consent Agreement requires that Assignor obtain SCL's and BPA's prior written consent to transfer or assign the rights and obligations under the First Assignment Agreement or the First Consent Agreement. Each of Assignor and Assignee desires to obtain such written consent, and each of BPA and SCL desires to grant such consent, in accordance with the terms hereof.

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants contained herein, and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the Parties do hereby agree as follows:

1. **Consent to Assignment.** Effective as of the Effective Date and as required by Section 12 of the First Consent Agreement, BPA and SCL each hereby approves and consents to the assignment of certain rights and obligations arising out of the First Assignment Agreement by Assignor to Assignee as more fully set forth in the Second Assignment Agreements.
2. **Assumption of Obligations.** Effective as of the Effective Time, Assignee shall perform the assigned obligations and responsibilities set forth in the Second Assignment Agreements for the Delivery Period of each Second Assignment Agreement (Assignee's Obligations). For purposes of this Consent Agreement, "Effective Time" shall mean the later of the Effective Date or the date by which the Parties have fully executed this Consent Agreement.

Each of SCL and BPA acknowledges and agrees to accept Assignee's performance of the Assignee's Obligations and relieves the Assignor of any performance obligation arising out of the Assignee's Obligations during the Delivery Period of the Second Assignment Agreements; provided, however, Assignor shall not be relieved of its payment obligations to SCL. Assignee shall perform the Assignee's Obligations in compliance with the COA. All obligations other than the Assignee's Obligations shall remain and be the obligation and responsibility of Assignor (the Assignor's Obligations), including but not limited to those obligations relating to, resulting from, or arising out of any breach of contract or any other actual or alleged failure of Assignor to perform any of the Assignor's Obligations, in each case arising out of, or relating to, the First Assignment Agreement or the performance thereof prior to the Effective Time. Assignee shall not assume, discharge, perform or be responsible in any way for any Assignor's Obligations. For purposes of this Consent Agreement, "Obligations" means indebtedness, obligations, duties and other liabilities, whether absolute, accrued, contingent, fixed or otherwise, or whether due or to become due with respect to the First Assignment Agreement or the Second Assignment Agreements, as applicable, including, but not limited to, any charges, fees, taxes, assessments, adders or surcharges imposed or authorized by any governmental entity and includes all operational matters.

3. **Additional Agreements.** BPA and SCL (each, a Consenting Party), Assignor and Assignee, as applicable, also agree to the following:
  - (a) Assignor shall endeavor to provide a minimum of 60 days advance written notice to each Consenting Party of any early termination prior to the expiration date of the Second Assignment Agreements;

- (b) Assignee shall arrange and maintain with BPA a mutually agreeable point of delivery for return of losses;
- (c) Assignee's schedules are subject to the scheduling limitations of the COA and are not eligible for intra-hour scheduling unless otherwise agreed by BPA;
- (d) During the Delivery Periods, BPA shall make available to Assignee on each Working Day, in accordance with BPA's then-current BPA Business Practices or other policies, information regarding Bonneville's PNW AC Intertie Operational Transfer Capability with respect to Preschedule days as defined by the WECC Preschedule Calendar. In the event an emergency or uncontrollable force causes a change in Bonneville's PNW AC Intertie Operational Transfer Capability, BPA shall notify Assignee of such change as soon as practicable;
- (e) Assignee's scheduling rights under the Second Assignment Agreements may not be redirected; and
- (f) If Assignee's scheduling rights are not fully utilized by Assignee in any hour, BPA may schedule for such hour BPA's transactions, including wheeling transactions, over the unused portion of Assignee's scheduling rights for such hour but no longer than such hour. Assignee shall not be compensated for BPA's usage of any unused portion of Assignee's scheduling rights. Assignee's scheduling rights shall be deemed to be not fully utilized in a given hour to the extent that Assignee does not schedule, on a pre-schedule or real-time schedule basis, any transaction for such hour for any MW amount of the Assignee's scheduling rights, with such MW amount being the unused portion of Assignee's scheduling rights for such hour.

4. **Capitalized Terms.** Capitalized terms used in this Consent Agreement and not otherwise defined shall have the respective meanings ascribed to such terms in the COA.
5. **Further Actions.** Each of the Parties hereto covenants and agrees, at its own expense, to execute and deliver, at the reasonable request of another Party hereto, such further instruments of transfer and assignment, and to take such other action, as such other Party may reasonably request to more effectively consummate the assignments and assumptions contemplated by this Consent Agreement.
6. **Governing Law.** This Consent Agreement shall be interpreted, construed, and enforced in accordance with Federal law, if applicable, or if no Federal law is applicable, with the laws of the State of Washington, without regard to conflict of laws principles to the contrary.

7. **Notices.** Any notice required under this Consent Agreement shall be in writing and shall be delivered in person; or with proof of receipt by a nationally recognized delivery service or by United States Certified Mail. Notices are effective when received. Any Party may change the name or address for receipt of notice by providing notice of such change. The Parties shall deliver notices to the following person and address:

***If to SCL:***

Seattle City Light  
Attn: Robin Cross  
PO Box 34023, Suite 3200  
Seattle, WA 98124-4023  
Phone: (206) 684-3392  
Fax: (206) 386-4555  
Email: robin.cross@seattle.gov

***Or, if by Overnight Mail:***

Seattle City Light  
Attn: Robin Cross  
700 Fifth Avenue, Suite 3200  
Seattle, WA 98104

***If to Assignor:***

EDF Trading North America, LLC 4700  
W. Sam Houston Pkwy N. Suite 250  
Houston, TX 77041  
Attn: Contract Administration  
Phone: (281) 781-0333  
Fax: (281) 653-1454  
Email:  
Hou\_contract\_admin@edftrading.com

***If to BPA:***

Bonneville Power Administration  
Attn: Transmission Account Executive  
for City of Seattle, City Light  
Department – TSE/TPP-2  
Phone: (360) 619-6016  
Fax: (360) 619-6940

***If by First Class Mail:***

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

***If by Overnight Delivery Service:***

Bonneville Power Administration –  
TSE/TPP-2  
7500 NE 41st Street, Suite 130  
Vancouver, WA 98662-7905

***If to Assignee:***

Southern California Edison  
2244 Walnut Grove Avenue, Quad 1C,  
Rosemead, CA 91770  
Attn: Contract Administration  
Phone: 626-302-3126  
Email:  
ESMPowerContractAdmin@sce.com

8. **Entire Agreement.** This Consent Agreement, including documents expressly incorporated by reference, constitutes the entire agreement between the Parties with respect to the consent by the Consenting Parties to the Second Assignment Agreements. It supersedes all previous communications, representations, or contracts, either written or oral, which purport to describe or embody the subject matter of this Consent Agreement.

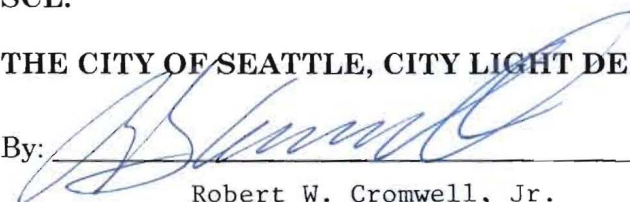
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originals read 2/13/13 @ 3:00 with file  
sv

- 9. **No Third Party Beneficiaries.** Except as otherwise expressly provided herein, nothing in this Consent Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty, liability, or obligation to, or standard of care with reference to, any third party, contractual or otherwise, on the part of any Party.
- 10. **Counterparts.** The Parties agree that this Consent Agreement may be executed in counterparts and that, when taken together, such counterparts constitute but one agreement.
- 11. **Assignment.** No Party may further transfer or assign the rights and obligations under the Second Assignment Agreements or this Consent Agreement, in whole or in part, without the written consent of the other Party to the Second Assignment Agreement and each Consenting Party, which consent shall not be unreasonably withheld.

IN WITNESS WHEREOF, the Parties have executed this Consent Agreement as of the date first above written.

**SCL:**

**THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT**

By:  \_\_\_\_\_

Robert W. Cromwell, Jr.

Name: \_\_\_\_\_

Director, Power Contracts & Resource Acquisition

Title: \_\_\_\_\_

**Assignor:**

**EDF TRADING NORTH AMERICA, LLC**

By:  \_\_\_\_\_ sm

Name: **W. Eric Dennison**  
**Senior Vice President**

Title: \_\_\_\_\_



PDF mail 1/30/13 @ 3:51 -H  
Original mail 2/13/13 @ 3:00 via kda  
SV

**Assignee:**

**SOUTHERN CALIFORNIA EDISON COMPANY**

By: 

Name: STEVEN D. EISENBERG

Title: Vice President

**BPA:**

**UNITED STATES OF AMERICA**

**Department of Energy**

**Bonneville Power Administration**

By: 

Name: Young S. Lian

Title: Transmission Account Executive

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 29, 2010

In reply refer to: TSE/TPP-2

Mr. Robert Cromwell, Director Power  
Contracts and Resource Acquisition  
City of Seattle, City Light Department  
700 Fifth Avenue, Suite 2822  
Seattle, WA 98124-4023

Re: City of Seattle, City Light Department Partial Assignment of Capacity Owner Share

Dear Mr. Cromwell:

Over the past several months the City of Seattle, City Light Department (Seattle) and the Bonneville Power Administration (Bonneville) have been discussing a possible limited term assignment of a portion of Seattle's Third AC Capacity Ownership share. Provisions related to this transmission capacity are found in the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94522, between Seattle and Bonneville. Bonneville must approve any partial assignment except for an assignment by Seattle to another Capacity Owner of part of its Capacity Ownership Share and all of Seattle's rights and obligations with respect thereto. In addition to the requirements listed below, Bonneville reserves its rights under Section 6(a) of the Capacity Ownership Agreement to grant or withhold its approval based on specific information about the proposed Assignee.

In order to approve this prospective assignment, Bonneville requires the following:

- A Letter Agreement must be executed between Seattle, Bonneville and the Assignee prior to start of scheduling by the Assignee. This Letter Agreement would describe the rights and obligations under the Capacity Ownership Agreement that Seattle is assigning to the Assignee and any other arrangements or information that may be necessary to implement the assignment. The Letter Agreement's contract number would be referenced on the tags submitted by the Assignee.
- The Assignee must be responsible to Bonneville for returning losses.
- Seattle must retain all rights and responsibilities regarding payments under Section 9 of the Capacity Ownership Agreement.

JUN 29 2010

- Seattle must retain all Capacity Owner rights and responsibilities with respect to the Owners Committee including communications with Bonneville, attendance and voting.
- The monthly payment to Seattle by Bonneville under Section 3(b)(1)(B) of the Capacity Ownership Agreement for unused capacity must continue to be paid to Seattle rather than pro-rated between Seattle and the Assignee.
- Seattle shall give Bonneville written notice of the assignment within 10 days after the execution and delivery of the agreement effectuating the assignment between Seattle and the Assignee.

After execution of a Customer Data Entry (CDE) Agreement, the Assignee would be allowed access to Bonneville's CDE system to see its daily scheduling share. The scheduling share will be the Assignee's pro-rata allocation of Seattle's Scheduling Share between Seattle and the Assignee.

BPA will need 60 days notice prior to the start of scheduling by the Assignee so that we have adequate time to make the necessary scheduling system changes.

I hope that this information meets with Seattle's expectations regarding this assignment. Please do not hesitate to contact me if you need additional information.

Sincerely,



Toni L. Timberman  
Senior Transmission Account Executive  
Transmission Sales

bcc:

C. Olsen – KSC/TPP-1

S. Larson – L-7

T. Timberman – TSE/TPP-2

P. Gibson – TSES/TPP-2

K. Gambs – TSRS/DITT-1

TSSP Review - TSSP-DITT-1

Customer File – TSE/TPP-2 (TM-11, Seattle City Light)

Official File – KSC/TPP-1

PGibson:clw:6113:6/29/2010 (W:\TMC\CT\Seattle City Light\capacity ownership\94522\94522\_SCL Partial Assignment of Capacity Share.doc)

Rec'd. 8/26/15 at 1:02pm via email.  
Rec'd. 8/28/15 at 12:00pm hand delivered.  
6m

Amendment No. 2  
Contract No. DE-MS79-94BP94522

**AMENDED**

**PNW AC INTERTIE AGREEMENT**

executed by the

**UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

acting by and through the

**BONNEVILLE POWER ADMINISTRATION**

and

**THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT**

This AMENDMENT No. 2 to the PNW AC Intertie Capacity Ownership Agreement (Agreement), Contract No. DE-MS79-94BP94522 is executed by the UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY, acting by and through the BONNEVILLE POWER ADMINISTRATION (BPA) and THE CITY OF SEATTLE, CITY LIGHT DEPARTMENT (Seattle). BPA and Seattle are sometimes referred to individually as "Party" and collectively as "Parties" as the context suggests below.

This Amendment No. 2 updates Section 1, Sections 3b and 4a and 4b to incorporate Intra-Hour Scheduling. Amendment No. 1 was never executed by the Parties; however, this amendment is labeled as Amendment No. 2 for internal tracking purposes.

The Parties agree to the following:

**1. EFFECTIVE DATE**

This Amendment No. 2 shall take effect at 0000 hours on September 1, 2015 (Effective Date).

**2. AMENDMENT OF AGREEMENT**

This Amendment No. 2 amends the Agreement as follows:

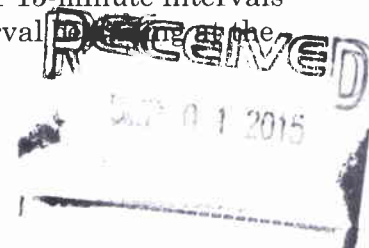
Add the following WHEREAS clause:

WHEREAS the Parties amended sections 1, 3 and 4 of the Agreement to reflect changes in Seattle's rights as to its Scheduling Share;"

**3. DEFINITIONS.**

Section 1 is amended to add the following definitions:

"(y1) "Intra-Hour Scheduling Interval" means each of the four 15-minute intervals during an operating hour, the first such 15-minute interval starting at the start of the operating hour.



- (y2) "Intra-Hour Scheduling Interval Schedule" means a schedule representing an Intra-Hour Scheduling Interval, and may consist of either the submission of a new 15-minute schedule or adjustment to an hourly schedule."

Definition (bbb) is amended to read as follows:

- "(bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of Seattle's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour. All references to Scheduling Share utilized during an hour or on an hourly basis shall also be interpreted to include a Scheduling Share as it may be utilized for an Intra-Hour Scheduling Interval, as applicable."

#### 4. **CAPACITY RIGHTS.**

Section 3(b) is amended to read as follows:

"(b) **Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, Seattle shall notify Bonneville in writing of Seattle's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and Seattle shall have the right to utilize its Scheduling Share pursuant to the paragraph Seattle elects. Prior to Bonneville's receipt of such notification, Seattle shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If Seattle fails to make an election within the prescribed time period, Seattle shall be deemed to have elected the option set forth in paragraph 3(b)(1).

Seattle has elected to utilize its Scheduling Share pursuant to paragraph 3(b)(1). Therefore, paragraph 3(b)(2) does not apply."

Section 3(b)(1)(B) is amended to read as follows:

- "(B) If Seattle's Scheduling Share is not fully utilized by Seattle in any hour, Bonneville may use for such hour (including, without limitation, for Bonneville wheeling for other entities) the unused portion of Seattle's Scheduling Share for such hour but no longer than such hour. There shall be no charge to Bonneville for any such use of the unused portion of Seattle's Scheduling Share under this paragraph or under paragraph 4(b)(3). For purposes of this subparagraph 3(b)(1)(B), Seattle's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Seattle has not scheduled, or does not schedule, on a Preschedule, Intra-Hour Scheduling Interval, or Real-time Schedule basis, any transaction for such hour on any MW amount of Seattle's Scheduling Share."

**5. SCHEDULING.**

Sections 4(a) and 4(b) are amended to read as follows:

- “(a) Seattle shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Seattle's Scheduling Share for such hour. The MW amount of Seattle's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Seattle's north-to-south schedules and south-to-north schedules (net schedules) for such hour. The un-used portion of Seattle's Scheduling Share shall be subject to adjustment as provided for in paragraph 4(b)(3).
- (b) Seattle shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1), 4(b)(2) and 4(b)(3). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours and intra-hour intervals referenced in paragraphs 4(b)(1), 4(b)(2) and 4(b)(3) are Pacific Time.”

Section 4(b)(2)(B) is amended to read as follows:

- “(B) Real-time Schedules for hourly scheduling shall be arranged for a full hour. Arrangements shall be completed no later than 20 minutes prior to that hour. Real-time Schedules for intra-hour scheduling shall be arranged as described in section 4(b)(3).”

Add Sections 4(b)(3)(A) through 4(b)(3)(D) as follows:

“(3) **Intra-Hour Scheduling**

- (A) Seattle, or any successive assignee of its rights in its Scheduling Share, may submit Intra-Hour Scheduling Interval Schedules up to 20 minutes prior to the applicable Intra-Hour Scheduling Interval for service to be provided pursuant to such schedules for use of its firm transmission capacity.
- (B) In instances where an Intra-Hour Scheduling Interval Schedule is not submitted, Seattle, or any successive assignee, shall be deemed to have submitted a 0 (zero) schedule but shall retain the right to submit an Intra-Hour Scheduling Interval Schedule in any subsequent Intra-Hour Scheduling Interval.
- (C) Use of firm transmission capacity associated with an Intra-Hour Scheduling Interval Schedule shall have priority over Bonneville's use of Seattle's unused Scheduling Share.
- (D) After 20 minutes prior to any Intra-Hour Scheduling Interval for service to be provided pursuant to Intra-Hour Scheduling Interval Schedules, any unused portion of Seattle's Scheduling Share shall be relinquished to Bonneville for the hour; provided however, any unused portion of Seattle's Scheduling Share shall be further subject to

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adjustment for Intra-Hour Scheduling Interval Schedules submitted pursuant to this paragraph, by Seattle, or any successive assignee, for any subsequent Intra-Hour Scheduling Interval."

6. The Parties agree that all other terms and conditions of the Agreement remain the same.

7. **SIGNATURES**

The Parties have executed this Amendment as of the last date indicated below.

THE CITY OF SEATTLE, CITY LIGHT  
DEPARTMENT

By:

Wayne L. Morier

Name:

Wayne L. Morier  
(Print/Type)

Title:

Director - Power Mgmt

Date:

8/26/15

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By:

Toni L. Timberman

Name:

Toni L. Timberman  
(Print/Type)

Title:

Senior Transmission Account Executive

Date:

8/25/2015

COLsen: 6872 CCM: Amendment





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 30, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Section 11(b)(1) of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94522 (Capacity Ownership Agreement), between the Bonneville Power Administration (BPA) and The City of Seattle, City Light Department (Seattle) requires Seattle to participate in the Remedial Action Scheme (RAS) necessary to maintain Seattle's share of intertie capacity.

The RAS includes generator dropping to support north to south schedules on the AC Intertie. Seattle has historically purchased generation dropping RAS service from BPA to fulfill that portion of its obligation under the Capacity Ownership Agreement.

BPA will continue to provide generator dropping service until such time as Seattle arranges to self-provide generator dropping to meet its obligations. If Seattle elects to provide its own generator dropping, Seattle must provide BPA with at least two years notice to allow time for necessary system adjustments. Consistent with Section 11(b)(1) of the Capacity Ownership Agreement, Seattle would also need to demonstrate to BPA that it has the ability to self-provide generator dropping.

BPA has updated its charge for generator dropping service to account for two separate changes affecting its cost of providing the service: the 2016 upgrade of the DC Intertie and BPA's updated generator dropping rate set in the BP-18 Rate Case. The upgrade to the DC Intertie reduced the amount of generator dropping required because the DC Intertie rating went from 3,100 MW to 3,220 MW. The BP-18 Rate Case increased the cost of providing generator dropping service to reflect 1) the increase in O&M costs; 2) Grand Coulee 3rd power house outages; and 3) an increase in the Handy Whitman cost index.

The charge for generator dropping service has thus fluctuated as follows:

- October 1, 2015 – February 28, 2018: \$6.90 per MW/month (Previous Charge)
- December 20, 2016 – September 30, 2017: \$6.79 per MW/month (Interim Charge)
- October 1, 2017 – present: \$9.64 per MW/month (New Charge)

The new charge of \$9.64 per MW/month will be reflected in Seattle's monthly transmission bills starting March 1, 2018. Seattle's March transmission bill will also reflect a true-up from December 2016 through February 2018 to reflect the changes in the charge for generator dropping. This true-up is summarized in the table below:

<b>Refund using Interim Charge minus Previous Charge (from period of December 20, 2016 to September 30, 2017)</b>	<b>Charge using New Charge minus Previous Charge (from period of October 1, 2017 to February 28, 2018)</b>	<b>One time amount to be billed using New Charge on Seattle's March 2018 transmission bill</b>
$[\$6.79 - \$6.90] \times 9 \text{ months and } 11 \text{ days} \times 160 \text{ MW} = - \$165$	$[\$9.64 - \$6.90] \times 5 \text{ months} \times 160 \text{ MW} = \$2,192$	$- \$165 + \$2,192 = \$2,027$

If you have any questions regarding this information, please contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.03.30  
12:17:06 -07'00'

Transmission Account Executive  
Transmission Sales



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

January 28, 2019

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Enclosed please find proposed amendments to the FY 2015 through FY 2020 Operating Plans. Sections 9(b)(2)(B)(iii) and 13(k) of the PNW AC Intertie Capacity Ownership Agreement (COA) allow operating plans to be amended to add replacement costs, or to increase forecasted costs. For the following Work Orders, Actual or Updated Costs exceed the Forecasted Costs by at least five percent. These Work Orders were included in prior operating plans, so the proposed Amendments to the Operating Plans below reflect the additional costs.

**Table 1**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plans to be Amended</b>	<b>Forecasted Costs</b>	<b>Actual or Updated Costs<sup>1</sup></b>
00297236	Ashe-Marion No. 2 - Replace Spacer-Dampers (225.3 miles)	2016, 2018, 2019, 2020	\$4,404,125	\$4,750,000
TBD Dixonville 04	Dixonville Substation - Replace Series Capacitor Controls (PAC Project)	2015, 2016, 2017, 2018, 2019, 2020	\$600,000	\$972,000
TBD Grizzly 02	Grizzly Substation - Replace SCADA/Sequential Event Recorder (BPA Project)	2018, 2020	\$1 <sup>2</sup>	\$290,000
TBD Malin 18	Replace Sequential Event Recorder	2018, 2020	\$1 <sup>2</sup>	\$1,300,000

<sup>1</sup> The costs listed under the “Actual or Updated Costs” column are Direct Costs (without Indirect Costs or AFUDC costs). Please note that for work orders with the interim designation of “TBD”, the actual costs are not available at this time so the information listed in Table 1 is an updated cost (rounded).

<sup>2</sup> For the \$1 listed under the column “Forecasted Costs”, this was a placeholder representing that there will be a future cost. As of the date of this letter, we are providing updated information on the costs.

The following Work Orders are proposed to be *added* to the Operating Plans listed below.

**Table 2**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs as of the Date of this Letter</b>	<b>Work Order Approved &amp; Work Order Closed Dates</b>
00374787	Malin Substation - Replace Round Mountain Relays	2015, 2016, 2017, 2018	\$970,000	11/30/2014 & 1/17/2018
00439779	Ashe-Marion No. 2 - Emergency Replacement of Conductor	2017, 2018, 2019	\$4,300,000	3/7/2017 & 2/22/2018
00440381	Slatt Substation - Emergency Replacement of Breaker	2018, 2019	\$1,100,000	3/24/2017 & 11/27/2017

If you would like to recommend a revision to any forecasted cost or dispute the addition of a project, please do so through the Capacity Owner Committee (Committee). Sections 13(d), 13(e) and 13(m) of the COA detail the process and requirements. If we receive no recommendation from the Committee by February 25, 2019, the addition of these projects, as well as increased costs, will be considered accepted on February 25, 2019 according to the contract terms (See Sections 13(e) and 13(m)).

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2019.01.28  
14:56:02 -08'00'

Transmission Account Executive  
Transmission Sales

Enclosure

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,034,679				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$517,340				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,764				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,574,783				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

February 12, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Listed in Table 1 below are the Schedule C Replacement Projects energized from April 2016 to April 2017. Table 1 summarizes the work order numbers, project information, and The City of Seattle, City Light Department's (Seattle) pro rata shares of the project costs under Contract No. DE-MS79-94BP94522, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date<sup>1</sup></b>	<b>Seattle Cost Share</b>
00339633	Chief Joseph Substation – Security Enhancements	7/7/2018	\$10,724
00356246	Grizzly Substation – Replace Analog Transfer Trip Equipment	7/21/2018	\$334
00356248	Sand Spring Compensation Station – Replace Analog Transfer Trip Equipment	8/5/2018	\$6,880
00401519	John Day Substation – Station Service Cable Replacement	2/7/2018	\$1,377
00404279	Fort Rock Compensation Station – Emergency Replacement of Transfer Switch Bank No. 1	7/10/2018	\$5,937

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for work order No. 00401519, it means that the work order was closed, but that the work order and Operating Plan were later amended. Work order No. 00401519 was amended to add the John Day Substation project cost pursuant to section 13(k) of the COA.

The charges for these projects will be included in Seattle's February transmission bill to be sent in March 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00358697	Malin Substation – Replace Analog Transfer Trip Equipment	2018	Work Order Cancelled
00379615	Malin Substation – Malin Physical Security Enhancements	2016	Not applicable to COA
TBD Alvey 04	Alvey Substation – Replace Line Loss Logic Equipment for Marion Alvey Line	2016, 2018	Replaced by Work Order 00339242
TBD Alvey 05	Alvey Substation – Replace Equipment Related to Line Loss Logic/RAS	2016, 2018	Replaced by Work Order 00339242

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud bpa.gov  
Date: 2018.02.12 15:58:23  
-08'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

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**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

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**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 1, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5<sup>th</sup> Avenue, Suite 3220  
Seattle, WA 98104-5031

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Enclosed for your records are two updated Exhibits: Exhibit F, Revision No. 1 and Exhibit G Revision No. 1 of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94522, between the Bonneville Power Administration and the City of Seattle, City Light Department.

A draft Exhibit F, Revision No. 1 and draft Exhibit G, Revision No. 1 were provided as part of the document packet at the October 26, 2017 3<sup>rd</sup> AC Capacity Owners Annual Meeting.

The primary changes identified under Exhibit F, Revision No. 1 are as follows:

1. Add footnotes to clarify information throughout Exhibit F;
2. Add the Shunt Reactor at Alvey Substation, add the breakers and disconnect switches at Slatt Substation, and update several sections in this Exhibit F to reflect equipment added to the Intertie facilities over the years;
3. Add two disconnect switches at Grizzly Substation (for John Day terminals) and two disconnect switches at Marion Substation (for Buckley and Alvey line terminal) that were all inadvertently omitted from the original Exhibit F;
4. Add interchange meter references to Alvey Substation and Captain Jack Substation, add a Relay House to Alvey Substation, and add a Control House to Grizzly Substation and Malin Substation respectively to clarify treatment for these facilities; and
5. Add the percentages for most of the station general facilities at various substations.

The change under Exhibit G, Revision No. 1 is to update the addition of PacifiCorp and that Turlock Irrigation District is the permanent assignee of Power Resources Cooperative and not Pacific Northwest Generating Cooperative.

If you have any questions regarding this information, please contact me by June 18, 2018 at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.06.01 15:13:53 -07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		

1. **Alvey 500 kV Switchyard**

Bank No. 5 Terminal

• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100

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<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	100
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5035	100	100
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General <sup>7</sup>	60	100
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the		

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.



*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

July 24, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Pursuant to Section 13(k) and 9(b)(2)(A)(v) of the PNW AC Intertie Capacity Ownership Agreement (COA), Contract No. DE-MS79-94BP94522 between The City of Seattle, City Light Department (Seattle) and the Bonneville Power Administration (BPA), I have enclosed for your review the amendment to the FY 2017 Operating Plan (Amendment).

The Amendment updates Schedules A, B, D, E, F, and G of the FY 2017 Operating Plan to reflect updated costs for FY 2017 and modifies the monthly charge related to those costs. Schedule ABFG is included to support Schedules A, B, F and G of the Operating Plan.

Each year's Operating Plan is used to forecast each Capacity Owner's allocation of qualifying expenses based on their ownership share. This monthly charge is included on each Capacity Owner's transmission bill. After the end of each fiscal year, the Operating Plan is amended to reflect actual, rather than forecasted costs. The pro-rata share of the difference between forecasted and actual costs is reflected as a one-time charge, or credit, on each Capacity Owner's transmission bill.

The actual costs are included in the "Actual" column of the Schedules A, B, D, E, F and G of the Amendment. The actual costs in Schedules D (General Plant), and E (Other-PacifiCorp) are *higher* than the forecast.

The other schedules show that actual costs in Schedules A (Operations), B (Maintenance), F (Contract and Rates), and G (Transmission Scheduling) are *lower* than the forecast.

Overall for FY 2017, actual costs for the BPA portion of the Third AC Intertie were *higher* than the forecasted costs communicated in the October 2, 2015 letter. The costs are higher by \$570,480, as shown on the summary page of the Amendment. The actual costs are \$233 per MW-month, compared to the forecasted costs of \$219 per MW-month in the 2015 letter.

The FY 2017 charge for Seattle will be \$26,242 plus \$1,385 interest, calculated pursuant to Section 9(b)(2)(A)(vi) of the COA. Thus, Seattle's total one time true-up charge will be \$27,627, in its July 2018 transmission bill to be sent in August 2018.

This letter also serves as notice of an amendment to add five Work Orders to the Schedule Cs of this FY 2017 Operating Plan. Note that one of the Work Orders listed below has been billed and the other was part of a cancellation notice.

<b>Work Order Number / FY 17 Operating Plan Page</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs Estimate as of the Date of this Letter</b>
00248443/ Page 6	Alvey Substation – Replace Analog Transfer Trip Equipment	FY 2012, FY 2013, FY 2014, FY 2015, FY 2017	\$10,000,000
00329379/ Page 14	Marion-Alvey No. 1 – Access Road Improvements	FY 2017, FY 2018	\$729,000
00356246/ Page 28	Grizzly Substation – Replace Analog Transfer Trip Equipment	FY 2017, FY 2018	See Billing notice sent on February 12, 2018
00358697/ Page 29	Malin Substation – Analog Transfer Trip	FY 2017	See Cancellation notice sent on February 12, 2018

This letter also provides notice of amendment to the Schedule Cs of FY 2017 Operating Plan to increase the estimated cost related to the following Work Order:

1. Work Order 00339242 at Alvey Substation (Remedial Action Scheme) was originally forecasted for \$250k. Currently the estimated direct costs are nearly \$1.3M and preliminary notes state that the BPA cost share percentage will be 50%. Please refer to the WO Database Projections Report (June 12, 2018). The increased costs were originally provided in a report from PacifiCorp in April 2017. BPA's information from 2016, regarding the increase, is that the scope was broadened for changes in design, materials and construction.

In addition, we have updated the Schedule C, Table of Contents, to reflect current Work Order information, such as: cancelled Work Orders, Work Orders added to the FY 2017 Operating Plan, updates to Work Order completion dates, and Work Order descriptions.

Please review this information and respond through the Capacity Owners Committee (Committee) as provided in Sections 13(d), (e), and (m) of the COA. If the Committee recommends a revision(s) to any forecast cost, actual cost or General Plant Cost, in this Amendment, BPA will respond as provided in Section 13 of the COA. Pursuant to Sections 13(e) and (m) of the COA, if BPA does not receive a recommendation from the

Committee by August 20, 2018, the addition of these projects, together with the increased cost, will be considered accepted.

If you have any questions regarding this information, please contact me at (360) 619-6704.

Sincerely,

On behalf of J. Diego Ochoa  
Transmission Account Executive  
Transmission Sales

2 Enclosures



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

August 17, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Listed in Table 1 below are the Schedule C Replacement Projects energized from November 2014 to December 2017. Table 1 summarizes the work order numbers, project information, and The City of Seattle, City Light Department's (Seattle) pro rata shares of the project costs under Contract No. DE-MS79-94BP94522, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule C's referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Documents are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date <sup>1</sup>	Seattle Cost Share
00248443	Alvey Substation - Install a New Shunt Reactor	10/11/2018	\$621,205
00329379	Marion-Alvey No. 1 - Access Road Improvements	8/19/2018	\$13,142
00335841	Marion-Alvey No. 1 - Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	12/19/2018	\$73,952
00339242	Alvey Substation - Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	10/13/2018	\$42,604

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for Work Order No. 00348163, it means that the Work Order was closed, but that the Work Order and Operating Plan were later amended. Work Order No. 00348163 was amended to add the John Day Substation project cost pursuant to Section 13(k) of the COA.

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date <sup>1</sup></b>	<b>Seattle Cost Share</b>
00348163	Grizzly-Captain Jack No. 1 - Land Rights Acquisition for Access Road, Structure 156/1	4/11/2018	\$4,508
00381350	Summer Lake Substation - Upgrade Engine Generator	1/6/2019	\$20,149
00396160	Dixonville Substation - 500 kV Relay Replacements to Meridian (PAC Project)	2/21/2019	\$26,175
00396161	Meridian Substation - 500 kV Relay Replacements to Dixonville (PAC Project)	2/21/2019	\$22,802

The charges for these projects will be included in Seattle's August transmission bill to be sent in September 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00356249	Sycan Compensation Station – Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	2016, 2019	Not Applicable
00432972	Malin Substation – SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	2019	Work Order cancelled
00449853	Ashe-Marion No. 2 – Emergency Replacement of Access Road	2019	Work Order cancelled
TBD Malin 13	Malin Substation – Relay Replacement on the Round Mt. No. 1 line	2015, 2017	Combined with TBD Malin 14 project
TBD Malin 14	Malin Substation – Relay Replacement on the Round Mt. No. 2 line	2015, 2016, 2017	Combined into BPA Work Order #00374787
TBD Summerlake 03	Summerlake Substation – Work on BPA Relays on the Grizzly line	2015, 2017	Combined into BPA Work Order #00322042

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
TBD Sycan 01	Sycan Compensation Station – Replace Station Battery	2018	Combined into Work Order #00423702
TBD Sycan 02	Sycan Compensation Station – Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 03	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 04	Sycan Compensation Station - Update Grounding Equipment	2018	Combined into Work Order #00423702

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.08.17 14:32:47  
-07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			214		10,407.42

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			<u>122</u>		<u>34,083.37</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	<b>Total from Schedule C:</b>	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	<b>Schedule C Total After Proration:</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
9	<b>Customer Percentage Applied from Exhibit G</b>									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	<b>Exhibit G</b>									
19	<b>Customer</b>	<b>Percentage</b>								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-94BP94522.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month.

The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

We will have a comprehensive discussion at the November 1, 2018 Annual Meeting. Prior to that meeting, please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa".

JUAN OCHOA  
2018.09.28  
14:42:33 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	_____	_____
MFUs of the FCRTS	2	3,574	_____	_____
Allocation Factor (Line 1/Line 2)	3	2.27%	_____	_____
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727	_____	_____
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727	_____	_____
Operations functionalization factor (Line 4/Line 5)	6	100.00%	_____	_____
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495	_____	_____
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

**EXHIBIT I**

**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
 FY 2020  
 Operating Plan  
 EXHIBIT I  
 Schedule C Table of Contents**

Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
**FY 2020**  
**Operating Plan**  
**EXHIBIT I**  
**Schedule C Table of Contents**

*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.



**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** 00335885  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 152/2  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$2,412,093	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00381549  
**Project Short Description:** Replace Breaker Failure Relays  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00466505  
 Project Short Description: Ground Wire Replacement  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** TBD Alvey 12  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

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Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.6. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>						<b>1,297,309,592</b>	

↑ To D-1

[To Schedule D, Line 1]

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

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 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2020  
Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$351,026</b></u>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 21, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Listed in Table 1 below is the Schedule C Replacement Project energized in June 2017. Table 1 summarizes the work order number, project information, and The City of Seattle, City Light Department's (Seattle) pro rata share of the project costs under Contract No. DE-MS79-94BP94522, PNW AC Intertie Capacity Ownership Agreement. The Schedule C referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Documents are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	Seattle Cost Share
00340156	Marion Substation – Transfer Trip Replacement	11/21/2018	\$9,649

The charge for this project will be included in Seattle's November transmission bill to be sent in December 2018.

The Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00379612	Grizzly Substation – Physical Security Project	2017	General Plant
00381830	Malin Substation – Replacement of Communication Battery Charger	2017	General Plant
00381831	Fort Rock Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00381833	Sycan Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00384207	Buckley Substation – Replace Line Relay on Slatt Terminal	2019	Not Applicable
TBD Dixonville 05	Dixonville Substation – Regravel Yard	2018, 2019	Not Applicable

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.11.21  
11:56:58 -08'00'

Transmission Account Executive  
Transmission Sales

3 Enclosures

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b> <b><u>Bank No. 5 Terminal</u></b>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100

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<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	100
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5035	100	100
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General <sup>7</sup>	60	100
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>
<b>12. Meridian 500 kV Yard (BPA/PacifiCorp)</b>		

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the		

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line			Less		
	No.	Forecast	Actual	General	Adjusted	Difference
				Plant	Actuals	
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,764	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

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**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

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**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					



**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	Footnotes									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

**Interest Calculation**  
**The City of Seattle, City Light Department**  
**9/30/2016-5/31/2018**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/30/2016	5/31/2018		609	\$26,242	\$1,385.48
9/30/2016	10/30/2016	3.064%	31		68.29
10/31/2016	11/29/2016	3.065%	30		66.11
11/30/2016	12/30/2016	3.079%	31		68.62
12/31/2016	1/30/2017	3.086%	31		68.78
1/31/2017	2/27/2017	3.091%	28		62.22
2/28/2017	3/30/2017	3.096%	31		69.00
3/31/2017	4/29/2017	3.108%	30		67.03
4/30/2017	5/30/2017	3.121%	31		69.56
5/31/2017	6/29/2017	3.130%	30		67.50
6/30/2017	7/30/2017	3.143%	31		70.06
7/31/2017	8/30/2017	3.159%	31		70.40
8/31/2017	9/29/2017	3.170%	30		68.36
9/30/2017	10/30/2017	3.208%	31		71.50
10/31/2017	11/29/2017	3.216%	30		69.37
11/30/2017	12/30/2017	3.225%	31		71.88
12/31/2017	1/30/2018	3.237%	31		72.15
1/31/2018	2/27/2018	3.239%	28		65.21
2/28/2018	3/30/2018	3.262%	31		72.70
3/31/2018	4/29/2018	3.281%	30		70.77
4/30/2018	5/31/2018	3.302%	32		75.97
			<b>609</b>		<b>1,385.48</b>

"This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release."

**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

$\$9,655,061 / 3450 \text{ MW} / 12 \text{ Months} =$   $\$233.21 / \text{MW-month}$   
**Rounded to \$233 for whole-dollar billing**

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Operating Revenues</b>						
<b>Sales</b>						
<b>Network</b>						
1 Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617	\$ 133,535	102%
2 Other Network	436,310	461,684	451,685	442,038	446,492	101%
3 Intertie	73,891	78,630	76,368	76,949	76,257	99%
4 Other Direct Sales	263,312	270,592	263,557	265,520	265,824	100%
<b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262	41,491	96%
<b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945	128,126	105%
<b>7 Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>	<b>1,091,725</b>	<b>101%</b>
<b>Operating Expenses</b>						
<b>Transmission Operations</b>						
<b>System Operations</b>						
8 INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701	9,903	93%
9 POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945	13,722	98%
10 CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009	23,567	94%
11 TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979	8,029	80%
12 STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118	2,028	96%
13 SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081	23,444	97%
14 <b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>	<b>80,693</b>	<b>94%</b>
<b>Scheduling</b>						
15 RESERVATIONS	1,167	1,383	1,227	1,044	1,211	116%
16 PRE-SCHEDULING	382	276	284	284	211	74%
17 REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929	5,062	103%
18 SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182	3,656	87%
19 SCHEDULING AFTER-THE-FACT	273	289	277	277	305	110%
20 <b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>	<b>10,445</b>	<b>97%</b>
<b>Marketing and Business Support</b>						
21 TRANSMISSION SALES	2,299	2,775	2,834	2,621	2,524	96%
22 MKTG TRANSMISSION FINANCE	-	-	-	-	-	0%
23 MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660	4,465	96%
24 MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116	2,093	99%
25 MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651	7,948	119%
26 <b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>	<b>17,030</b>	<b>106%</b>
27 EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753	16,908	95%
28 LEGAL SUPPORT	2,611	3,548	1,641	1,962	2,304	117%
29 TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522	9,847	73%
30 AIRCRAFT SERVICES	1,094	2,230	2,489	1,839	882	48%
31 LOGISTICS SERVICES	6,685	4,488	4,354	5,151	5,861	114%
32 SECURITY ENHANCEMENTS	889	716	561	561	547	98%
33 <b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>	<b>36,350</b>	<b>89%</b>
<b>34 Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>	<b>\$ 144,518</b>	<b>94%</b>

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling



Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

<p>TLM ROW VEG                  \$ 54,759,896                  SUB Maint                  \$ 30,860,406</p>	<p>50.84% \$ 59,480,947.02</p> <p>16.22% \$ 18,970,654.33</p> <p>8562030295.78% \$ 121,417,590.42</p> <p>8562030292.00% \$ 116,994,457.86</p>	<p>Total Allocation incl. Contr. &amp; Rates.</p> <p>Total Allocations</p>
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<p>\$ 36,509,900.95 SPC+PSC</p> <p>\$ 11,570,907.11 Mtc. Indirects</p> <p>\$ 155,357,995.65 Dir Mtc less Indirects</p>
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	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

<1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.

<2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.

<3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.

<4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
Operating Plan**

**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement**  
**FY 2017**  
**Operating Plan**  
**EXHIBIT I**  
**Schedule C Table of Contents**

This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

**Capacity Ownership Agreement  
FY 2017  
Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right-of-Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

**Capacity Ownership Agreement  
FY 2017  
Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

Exhibit I Page 6  
Prepared Date: 7/24/2018

*Below is information about work orders added or removed, acronyms and further information.*

Work Order Number(s) ADDED	Date of Correspondence	Page Number
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

Work Order Number(s) REMOVED or to be REMOVED	Correspondence Notes	Page Number
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

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- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
FY2017 OPERATING PLAN**

Exhibit I - Page 47  
Prepared Date 7/24/2018

**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	11	<u><u>\$3,266,580</u></u>	<u><u>\$2,485,604</u></u>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 48  
 Prepared Date 7/24/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
<b>Total General Plant</b>	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>


<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			<b>1,260,992,898</b>

To D-1  


Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 <b>TOTAL GENERAL PLANT</b>		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
-------	----------------------	-------------

*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 2000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 2000909, 2000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 2000925, 2000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$397,813.51</b></u>	<u><b>\$381,573.21</b></u>	<u><b>(\$16,240.30)</b></u>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Ms. Stefanie Johnson, Senior Power Analyst  
The City of Seattle, City Light Department  
700 5th Avenue, Suite 3220  
Seattle, WA 98104

Subject: Contract No. DE-MS79-94BP94522

Dear Ms. Johnson:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-94BP94522.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month.

The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

We will have a comprehensive discussion at the November 1, 2018 Annual Meeting. Prior to that meeting, please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

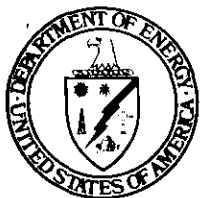
Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa", is written over a light blue horizontal line.

JUAN OCHOA  
2018.09.28  
14:42:33 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure



**Department of Energy**  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

In reply refer to: PMT

SEP 26 1994

Amendatory Agreement No. 1  
Contract No. DE-MS79-94BP94523

Mr. Joseph W. Nadal  
Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE. Halsey, Suite 200  
Portland, OR 97232

Dear Mr. Nadal:

This letter constitutes an agreement between the United States of America, Department of Energy, acting by and through the Bonneville Power Administration (Bonneville) and the Pacific Northwest Generating Cooperative (PNGC), an Oregon cooperative corporation, to amend Contract No. DE-MS79-94BP94523 (Capacity Ownership Agreement), executed by PNGC on September 23, 1994, and responds to PNGC's August 24, 1994, letter regarding the Capacity Ownership Agreement. This letter agreement shall be effective upon the Effective Date of the Capacity Ownership Agreement and shall have the same term as the Capacity Ownership Agreement.

Bonneville and PNGC agree that subparagraphs 3(b)(2)(A) and 3(b)(2)(B) in the Capacity Ownership Agreement shall be deleted and the following language shall be substituted:

- (A) PNGC may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by PNGC. PNGC agrees to provide Bonneville access to its available unused Scheduling Share on any hour under terms and conditions comparable to those provided by Bonneville to PNGC under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto.
- (B) PNGC hereby waives any rights it may have under Exhibit B of the Long-Term Intertie Access Policy as Exhibit B existed on June 30, 1994, and any rights to access under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto. PNGC does not waive any other rights it may have to transmission access on Bonneville's PNW-PSW Intertie including but not limited to: (1) firm transmission service on Bonneville's PNW-PSW Intertie; (2) transmission service under the open market provisions of section 5(c)(2) of

Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto; or (3) any rights to request an order from the Federal Energy Regulatory Commission under Section 211, or any other applicable section, of the Federal Power Act or any successor statute, requiring Bonneville to provide transmission service to PNGC consistent with the above.

PNGC and Bonneville agree to negotiate in good faith the terms and conditions under which PNGC shall be able to access Bonneville's PNW-PSW Intertie under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy as it existed on June 30, 1994.

In order for Bonneville to implement the changes to (A) and (B) reflected above, a new paragraph 3(b)(2)(D) needs to be added to the Capacity Ownership Agreement. The language follows:

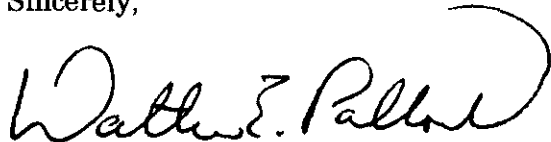
- (D) Bonneville shall not be obligated to provide wheeling under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto, until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to PNGC or until December 27, 1994, which ever occurs sooner.

Further, the following amendments to subsection 4(a) are made. Delete the phrase "(and only PNGC)" in the first sentence. Before the first sentence, insert the following three sentences: "For purposes of this section 4, all references to PNGC shall mean PNGC or its designee. Any such designee shall be identified in writing by PNGC to Bonneville. Only one entity may submit schedules on PNGC's behalf at any one time."

In addition, the following amendment to Exhibit E, paragraph B, is made. Delete the phrase "subparagraph 3(b)(1)(C)" and replace it with the phrase "subparagraph 3(b)(1)(C) or 3(b)(2)(B)."

If the foregoing terms are acceptable to PNGC, please sign and return one copy of this letter agreement. The remaining copy is for your files.

Sincerely,



Walter E. Pollock  
Group Vice President, Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

ACCEPTED:

PACIFIC NORTHWEST GENERATING  
COOPERATIVE

By David E. Piper

Name David E. Piper  
(Print/Type)

Title Executive V.P. & General Manager

Date 9/30/94

Effective Date \_\_\_\_\_

**AMENDATORY AGREEMENT**  
to the  
**PACIFIC NORTHWEST AC INTERTIE  
CAPACITY OWNERSHIP AGREEMENT**  
executed by the  
**UNITED STATES OF AMERICA  
DEPARTMENT OF ENERGY**  
acting by and through the  
**BONNEVILLE POWER ADMINISTRATION**  
and  
**PACIFIC NORTHWEST GENERATING COOPERATIVE**

**Index**

<b>Section</b>		<b>Page</b>
1.	Definitions .....	2
2.	Amendment of Agreement .....	2

This AMENDATORY AGREEMENT is executed as of February 5, 1997 by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (hereinafter referred to as "BPA") and the PACIFIC NORTHWEST GENERATING COOPERATIVE (hereinafter referred to as "PNGC"), an Oregon cooperative corporation. The PNGC and BPA are sometimes referred to individually as "Party" and collectively as "Parties," as the context suggests below.

**W I T N E S S E T H :**

WHEREAS the Parties on September 27, 1994, entered into the Pacific Northwest AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523 (Agreement); and

WHEREAS the Parties on September 30, 1994, entered into Amendatory Agreement No. 1 to the Agreement which revised subsection 3(b)(2); and

WHEREAS the Federal Energy Regulatory Commission (FERC) has issued Order No. 888, "Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Service by Public Utilities; Recovery of Stranded Costs By Public Utilities and Transmitting Utilities;" and

WHEREAS the Parties desire to amend the Agreement so as to comply with such Order No. 888 and 889.

NOW, THEREFORE, the Parties agree as follows:

**1. DEFINITIONS**

Capitalized terms used in this Amendatory Agreement, unless otherwise defined herein, have the respective meanings set forth for such terms in the Agreement.

**2. AMENDMENT OF AGREEMENT**

Subsection 3(b) of the Agreement is deleted in its entirety and the following is inserted in lieu thereof:

**(b) Right to Wheel for Third Parties**

The PNGC may use its Scheduling Share to transmit any and all power and energy whether or not such power or energy is owned by PNGC. The PNGC shall have no obligation under this Agreement to make available to BPA any portion of PNGC's Scheduling Share which is unused in any hour, and BPA shall not schedule over PNGC's Scheduling Share without PNGC's prior written consent.

BPA shall treat all scheduling information consistent with the standards of conduct contained in 18 C.F.R. Part 37 of FERC's regulations.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendatory Agreement.

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By Thomas M. Noguchi  
Senior Account Executive

Name Thomas M. Noguchi  
(Print/Type)

Date 2/3/97

PACIFIC NORTHWEST GENERATING COOPERATIVE

By David E. Piper

Name David E. Piper  
(Print/Type)

Title President and CEO

Date 2/5/97

(HQ5F01-TMC-WAMCP\TMC\CT94523.DOC)



**Pacific Northwest Generating Cooperative**

**"Partners in Power Management"**

February 7, 1997

Tom Noguchi  
Customer Account Executive  
Bonneville Power Administration  
P.O. Box 3621  
Portland, OR 97208-3621

Dear Tom,

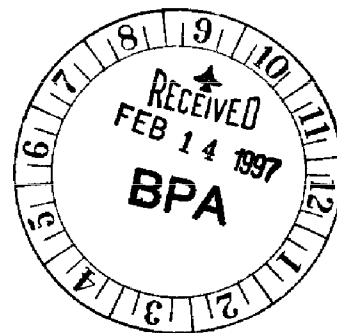
Here is a copy of the executed Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523. Thank you for your help.

Sincerely,

A handwritten signature in black ink, appearing to read 'Aleka U. Kitchen', written over a circular stamp.

Aleka U. Kitchen  
Senior Power Management Specialist

Enclosure





Amendment No. 3  
Contract No. DE-MS79-94BP-94523

**AMENDMENT**  
executed by the  
**BONNEVILLE POWER ADMINISTRATION**  
and  
**POWER RESOURCES COOPERATIVE**  
(Formerly **PACIFIC NORTHWEST GENERATING COOPERATIVE**)

This AMENDMENT to the PNW AC Intertie Capacity Ownership Agreement, Contract Number 94PB-94523, (Agreement) is executed by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (BPA) and Power Resources Cooperative, formerly known as Pacific Northwest Generating Cooperative (Customer). The Customer and BPA are sometimes referred to individually as "Party", and collectively as "Parties" as the context suggests below.

This Amendment No. 3 (Amendment) to the Agreement between BPA and the Customer acknowledges that on March 7, 1996, amended articles of incorporation were filed by Customer with the Secretary of State of Oregon formally changing its name to Power Resources Cooperative (PRC).

BPA and the Customer agree:

1. **EFFECTIVE DATE**  
This Amendment shall take effect on the date executed by the Parties (Effective Date).
2. **AMENDMENT OF AGREEMENT**  
BPA and the Transmission Customer wish to amend the Agreement as follows:
  - (a) All references in the Agreement to "Pacific Northwest Generating Cooperative" or "PNGC" are hereby replaced with "Power Resources Cooperative."
3. **OTHER TERMS AND CONDITIONS UNAFFECTED**  
The Parties agree that all other terms and conditions of the Agreement are unaffected by this Amendment.

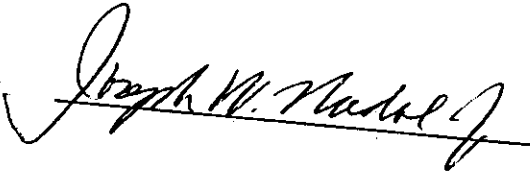
4.

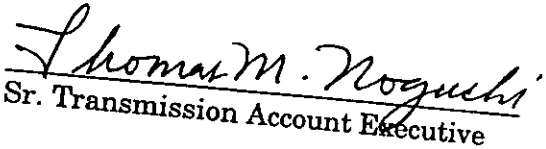
**SIGNATURES**

The signatories represent that they are authorized to enter into this Amendment on behalf of the Party for whom they sign.

**POWER RESOURCES COOPERATIVE**

**UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration**

By 

By 

Name Joseph W. Nadal, Jr.  
(Print/Type)

Name Thomas M. Noguchi  
(Print/Type)

Title Senior Vice President

Date 11/29/2000

Date 11/30/2000

Amendment No. 4  
Contract No. DE-MS79-94BP94523

**AMENDMENT**  
**executed by the**  
**UNITED STATES OF AMERICA**  
**DEPARTMENT OF ENERGY**  
**acting by and through the**  
**BONNEVILLE POWER ADMINISTRATION**  
**and**  
**TURLOCK IRRIGATION DISTRICT**

This AMENDMENT to the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523, (Agreement) is executed by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (BPA) and Turlock Irrigation District (Customer). BPA and Turlock are sometimes referred to individually as "Party" and collectively as "Parties."

Power Resources Cooperative (PRC) has agreed to assign and delegate all of its rights and obligations under the Agreement to Customer, from and after 11:59:59 PM Pacific Prevailing Time (PPT) on December 31, 2015. Customer has agreed to accept and assume such assignment and delegation.

The Parties, acting through their authorized representatives, agree to the following:

1. **EFFECTIVE DATE**  
This Amendment shall take effect at 11:59:59 PM PPT on December 31, 2015 (Effective Date).
2. **AMENDMENT OF AGREEMENT**  
The Agreement is amended as follows:
  - (a) All references in the Agreement to "Power Resources Cooperative" are replaced with "Turlock Irrigation District."

DEC 23 2015

- (b) The reference "To Bonneville:" in Section 21(a) of the Agreement shall be deleted and replaced with:

"To Bonneville:  
 Attention: Transmission Account Executive for Turlock Irrigation District –  
 TSE-TPP-2  
 Phone: (360) 619-6016  
 FAX: (360) 619-6940"

If by First Class Mail:  
 Bonneville Power Administration  
 P.O. Box 61409  
 Vancouver, WA 98666-1409

If by Overnight Delivery Service:  
 Bonneville Power Administration – TSE/TPP-2  
 905 NE 11<sup>th</sup> Avenue  
 Portland, OR 97232

- (c) The reference "To Power Resources Cooperative:" in Section 21(a) of the Agreement shall be deleted and replaced with:

"To Turlock Irrigation District:  
 Power Resources Department  
 P.O. Box 949  
 333 East Canal Drive  
 Turlock, CA 95381-0949  
 Phone:(209) 883-8222  
 FAX: (209) 656-2149

3. The Parties agree that all other terms and conditions of the Agreement remain the same.


4. **SIGNATURES**

The Parties have executed this Amendment as of the last date indicated below.

TURLOCK IRRIGATION DISTRICT

UNITED STATES OF AMERICA  
 Department of Energy  
 Bonneville Power Administration

By: 

By: 

Name: Brian LaFollette  
 (Print/Type)

Name: Brian D. Altman  
 (Print/Type)

Title: AGM Power Supply Admin

Title: Transmission Account Executive

Date: 12-9-15

Date: 20 Nov 2015

Contract No. 16TX-16190

**CONSENT AGREEMENT**  
**executed by the**  
**UNITED STATES OF AMERICA**  
**DEPARTMENT OF ENERGY**  
**acting by and through the**  
**BONNEVILLE POWER ADMINISTRATION**  
**and**  
**POWER RESOURCES COOPERATIVE**  
**and**  
**TURLOCK IRRIGATION DISTRICT**

This CONSENT AGREEMENT (Agreement) is executed by and among the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (BPA), POWER RESOURCES COOPERATIVE (PRC), and the TURLOCK IRRIGATION DISTRICT (TID). BPA, PRC, and TID are sometimes referred to individually as "Party," and collectively as "Parties" as the context suggests below.

**RECITALS**

WHEREAS, BPA and the Pacific Northwest Generating Cooperative (now known as PRC) entered into a Services Agreement, BPA Contract Number DE-MS79-94BP94309, executed as of December 29, 1994, as amended by Amendment No. 1, executed November 30, 2000, a true, correct and complete copy of which is attached hereto as Exhibit A (Services Agreement);

WHEREAS, BPA and PRC entered into a Transmission Agreement for formula power transmission service, BPA Contract Number DE-MS79-95BP94151, executed as of December 29, 1994, as amended by Amendment No. 1, executed November 30, 2000, and Exhibit C, Revision No. 12, effective as of October 1, 2015, a true, correct and complete copy of which is attached hereto as Exhibit B (FPT Agreement);

WHEREAS, BPA and PRC entered into a PNW AC Intertie Capacity Ownership Agreement, BPA Contract Number DE-MS79-94BP94523, entered into as of September 27, 1994, as amended by (a) Amendatory Agreement No. 1, executed as of September 30, 1994, (b) Amendatory Agreement No. 2, executed as of February 5, 1997, and (c) Amendment No. 3, effective as of November 30, 2000, a true, correct and complete copy of which is attached hereto as Exhibit C (Capacity Ownership Agreement) (the Services Agreement,

DEC 31 2015

FPT Agreement and the Capacity Ownership Agreement are collectively referred to as the Assigned Agreements);

WHEREAS, PRC has agreed to assign and delegate all of its rights, and obligations under the Assigned Agreements to TID, pursuant to an Assignment and Assumption Agreement between PRC and TID (the "Assignment and Assumption Agreement"), effective at 11:59:59 PM Pacific Prevailing Time (PPT) on December 31, 2015;

WHEREAS, TID has agreed to accept and assume PRC's assignment and delegation of the Assigned Agreements, effective at 11:59:59 PM PPT on December 31, 2015;

WHEREAS, PRC and TID have requested that BPA consent to said assignment, acceptance, delegation and assumption; and

WHEREAS, BPA is willing to consent to the assignment, acceptance, delegation and assumption of the Assigned Agreements from PRC to TID, subject to the terms and conditions provided herein.

NOW THEREFORE, the Parties, acting through their authorized representatives, agree as follows:

## **TERMS**

### **1. EFFECTIVE DATE**

This Agreement shall become effective at 11:59:59 PM PPT on December 31, 2015.

### **2. ACKNOWLEDGEMENT**

To the knowledge of BPA as of the date of its execution of this Agreement, (a) PRC has paid and performed its obligations as they became due under the Assigned Agreements, (b) there are no defaults by PRC under the Assigned Agreements, (c) BPA has made no claim against PRC under the Assigned Agreements (whether asserted or unasserted) that PRC has disputed, (d) the copies of the Assigned Agreements attached hereto are true, correct and complete, and (e) the Assigned Agreements remain in full force and effect. This acknowledgment does not preclude BPA from recovering from TID any liabilities relating to the period prior to the Effective Date of this Agreement such as billing adjustments should they be discovered after the Effective Date of this Agreement.

### **3. CONSENT AND RELEASE**

(a) BPA hereby consents to the assignment, acceptance, delegation and assumption of PRC's rights and obligations, under the Assigned Agreements to TID pursuant to the terms of the Assignment and Assumption Agreement. BPA's consent is subject to the express condition subsequent that TID shall execute the necessary documents amending the Assigned Agreements to reflect that, effective immediately after 11:59:59 PM Pacific Prevailing Time (PPT) on December 31, 2015, TID is a party to

the Assigned Agreements, substantially in the form attached hereto as Exhibits D, E and F.

(b) Upon delivery to BPA of (i) the fully executed Assignment and Assumption Agreement and (ii) fully executed originals of Exhibits D, E and F, BPA hereby releases PRC, effective on and after 11:59:59 PPT on December 31, 2015, from any and all liabilities and obligations arising out of or related to the Assigned Agreements.

**4. NO WAIVER**

The execution of this Agreement and the consummation of the transaction contemplated in this Agreement are not, and shall not be deemed to constitute, a waiver, forbearance or cure of any default arising prior to 11:59:59 PM PPT on December 31, 2015.

**5. GOVERNING LAW**

This Agreement shall be interpreted, construed, and enforced in accordance with Federal law.

**6. ENTIRE AGREEMENT**

This Agreement constitutes the entire agreement between the Parties. It supersedes all previous communications, representations, or contracts, either written or oral, which purport to describe or embody the subject matter of this Agreement.

**7. CONSENT**

BPA's consent to the assignment of the Assigned Agreements is subject to the express conditions contained herein.

**8. EXECUTION BY COUNTERPART**


This Agreement may be executed in a number of counterparts and shall be deemed to constitute a single document with the same force and effect as if all the Parties hereto having signed a counterpart had signed all other counterparts. Each Party shall deliver a signed counterpart to BPA, who will prepare a composite conformed copy and deliver the same to each Party.

**9. SIGNATURES**

The Parties have executed this Agreement as of the last date indicated below.

**POWER RESOURCES COOPERATIVE**

**TURLOCK IRRIGATION DISTRICT**

By: 

By: \_\_\_\_\_

Name: John P. Prescott  
*(Print/Type)*

Name: \_\_\_\_\_  
*(Print/Type)*

Title: Executive Vice President and  
General Manager

Title: \_\_\_\_\_

Date: December 14, 2015

Date: \_\_\_\_\_

**ACKNOWLEDGEMENT AND CONSENT:**

**UNITED STATES OF AMERICA**  
Department of Energy  
Bonneville Power Administration

By: 

Name: Brian D. Altman  
*(Print/Type)*

Title: Transmission Account Executive

Date: 30 NOV 2015

**UNITED STATES OF AMERICA**  
Department of Energy  
Bonneville Power Administration

By: 

Name: Claire A. Hobson  
*(Print/Type)*

Title: Power Account Executive

Date: 11/30/15



**9. SIGNATURES**

The Parties have executed this Agreement as of the last date indicated below.

POWER RESOURCES COOPERATIVE

TURLOCK IRRIGATION DISTRICT

By: \_\_\_\_\_

By: B. LaFollette

Name: \_\_\_\_\_  
(Print/Type)

Name: Brian LaFollette  
(Print/Type)

Title: \_\_\_\_\_

Title: AGM Power Supply Administration

Date: \_\_\_\_\_

Date: 12-9-15

**ACKNOWLEDGEMENT AND CONSENT:**

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By: [Signature]

Name: Brian D. Altman  
(Print/Type)

Title: Transmission Account Executive

Date: 30 NOV 2015

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By: [Signature]

Name: Claire A. Hobson  
(Print/Type)

Title: Power Account Executive

Date: 11/30/15

**EXHIBIT A**

**SERVICES AGREEMENT**

*(The Services Agreement follows this page.)*

**EXHIBIT B**

**FPT AGREEMENT**

*(The FPT Agreement follows this page.)*

**EXHIBIT C**

**CAPACITY OWNERSHIP AGREEMENT**

*(The Intertie Agreement follows this page.)*

**EXHIBIT D**

**AMENDMENT NO. 2 TO THE SERVICES AGREEMENT**

*(Amendment No. 2 follows this page.)*

**EXHIBIT E**

**AMENDMENT NO. 2 TO THE FPT AGREEMENT**

*(Amendment No. 2 follows this page.)*

**EXHIBIT F**

**AMENDMENT NO. 4 TO THE CAPACITY OWNERSHIP AGREEMENT**

*(Amendment No. 4 follows this page.)*



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 30, 2015

In reply refer to: TSE/TPP-2

Ms. Aleka Scott  
Vice President, Transmission and Contracts  
Power Resources Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232

Dear Ms. Scott: *ALEKA*

Enclosed for signature are three originals of the Consent Agreement, Contract No. 16TX-16190 (Agreement), between Power Resources Cooperative (PRC), Turlock Irrigation District (TID), and the Bonneville Power Administration (BPA). This Agreement sets forth BPA's consent to PRC's full assignment of its rights and obligations of Services Agreement No. DE-MS79-94BP94309, Transmission Agreement Contract No. DE-MS79-95BP94151 and PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523, to TID, effective January 1, 2016.

If PRC concurs, please sign all three originals of the Agreement, keep one original Agreement for your records and return one signed original to the following address below by the Close of Business December 23, 2015:

First Class Mail

Bonneville Power Administration  
Mail Stop: TSE/TPP-2  
P.O. Box 61409  
Vancouver, WA 98666-1409

Overnight Delivery Service

Bonneville Power Administration  
Mail Stop: TSE/TPP-2  
905 NE 11<sup>th</sup> Avenue  
Portland, OR 97232

Forward the remaining signed original to TID for their records at the following address:

Turlock Irrigation District  
Attn: James Farrar, Director, Energy Markets  
333 E. Canal Drive  
Turlock, CA 95380

JAN 4 2016



Additionally, for PRC's information, TID has been provided three originals of the Agreement including all six exhibits and instructed to provide both PRC and BPA a signed original of the Agreement. TID has also been provided two originals each of Amendment No. 2 to Service Agreement No. DE-MS79-94BP94309, Amendment No. 2 to Transmission Agreement Contract No. DE-MS79-94BP94151 and Amendment No. 4 to PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523, (Amendments) for execution and instructed to provide an original of each the Amendments to BPA.

If you have any questions regarding this letter, please contact me at (360) 619-6003.

Sincerely,



Brian D. Altman  
Transmission Account Executive  
Transmission Sales

3 Enclosures

bcc:

R. Josephson – FTD-2

J. Rancourt – CGF-7

T. Nunn – KSB-4

C. Augustine – KSC/TPP-1

C. Olsen – KSC/TPP-1

V. Shelton – KSC-MEAD-GOB

C. Christen – LT-7

T. Davis – LT-7

B. Altman – TSE/TPP-2

K. Gilliland – TSE/TPP-2

Y. Linn – TSE/TPP-2

D. Ochoa – TSE/TPP-2

T. Mussen – TSES/TPP-2

A. Simons – TSES/TPP-2

Technical Operations TOT CCM Reviewers

Customer File – (TM-11, Power Resources Cooperative, Pacific Northwest Generating  
Cooperative)

Official File – CCM\_Support



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

January 28, 2019

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Enclosed please find proposed amendments to the FY 2015 through FY 2020 Operating Plans. Sections 9(b)(2)(B)(iii) and 13(k) of the PNW AC Intertie Capacity Ownership Agreement (COA) allow operating plans to be amended to add replacement costs, or to increase forecasted costs. For the following Work Orders, Actual or Updated Costs exceed the Forecasted Costs by at least five percent. These Work Orders were included in prior operating plans, so the proposed Amendments to the Operating Plans below reflect the additional costs.

**Table 1**

Work Order No. for Schedule C	Facility – Project Information	FY Operating Plans to be Amended	Forecasted Costs	Actual or Updated Costs <sup>1</sup>
00297236	Ashe-Marion No. 2 - Replace Spacer-Dampers (225.3 miles)	2016, 2018, 2019, 2020	\$4,404,125	\$4,750,000
TBD Dixonville 04	Dixonville Substation - Replace Series Capacitor Controls (PAC Project)	2015, 2016, 2017, 2018, 2019, 2020	\$600,000	\$972,000
TBD Grizzly 02	Grizzly Substation - Replace SCADA/Sequential Event Recorder (BPA Project)	2018, 2020	\$1 <sup>2</sup>	\$290,000
TBD Malin 18	Replace Sequential Event Recorder	2018, 2020	\$1 <sup>2</sup>	\$1,300,000

<sup>1</sup> The costs listed under the “Actual or Updated Costs” column are Direct Costs (without Indirect Costs or AFUDC costs). Please note that for work orders with the interim designation of “TBD”, the actual costs are not available at this time so the information listed in Table 1 is an updated cost (rounded).

<sup>2</sup> For the \$1 listed under the column “Forecasted Costs”, this was a placeholder representing that there will be a future cost. As of the date of this letter, we are providing updated information on the costs.

The following Work Orders are proposed to be *added* to the Operating Plans listed below.

**Table 2**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs as of the Date of this Letter</b>	<b>Work Order Approved &amp; Work Order Closed Dates</b>
00374787	Malin Substation - Replace Round Mountain Relays	2015, 2016, 2017, 2018	\$970,000	11/30/2014 & 1/17/2018
00439779	Ashe-Marion No. 2 - Emergency Replacement of Conductor	2017, 2018, 2019	\$4,300,000	3/7/2017 & 2/22/2018
00440381	Slatt Substation - Emergency Replacement of Breaker	2018, 2019	\$1,100,000	3/24/2017 & 11/27/2017

If you would like to recommend a revision to any forecasted cost or dispute the addition of a project, please do so through the Capacity Owner Committee (Committee). Sections 13(d), 13(e) and 13(m) of the COA detail the process and requirements. If we receive no recommendation from the Committee by February 25, 2019, the addition of these projects, as well as increased costs, will be considered accepted on February 25, 2019 according to the contract terms (See Sections 13(e) and 13(m)).

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2019.01.28  
14:59:02 -08'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:  
Ms. Young Linn, Bonneville Power Administration

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679				
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340				
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764				
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4						
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 30, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Section 11(b)(1) of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523 (Capacity Ownership Agreement), between the Bonneville Power Administration (BPA) and Turlock Irrigation District (Turlock) requires Turlock to participate in the Remedial Action Scheme (RAS) necessary to maintain Turlock's share of intertie capacity.

The RAS includes generator dropping to support north to south schedules on the AC Intertie. Turlock has historically purchased generator dropping RAS service from BPA to fulfill that portion of its obligation under the Capacity Ownership Agreement.

BPA will continue to provide generator dropping service until such time as Turlock arranges to self-provide generator dropping to meet its obligations. If Turlock elects to provide its own generator dropping, Turlock must provide BPA with at least two years notice to allow time for necessary system adjustments. Consistent with Section 11(b)(1) of the Capacity Ownership Agreement, Turlock would also need to demonstrate to BPA that it has the ability to self-provide generator dropping.

BPA has updated its charge for generator dropping service to account for two separate changes affecting its cost of providing the service: the 2016 upgrade of the DC Intertie and BPA's updated generator dropping rate set in the BP-18 Rate Case. The upgrade to the DC Intertie reduced the amount of generator dropping required because the DC Intertie rating went from 3,100 MW to 3,220 MW. The BP-18 Rate Case increased the cost of providing generator dropping service to reflect 1) the increase in O&M costs; 2) Grand Coulee 3rd power house outages; and 3) an increase in the Handy Whitman cost index.

The charge for generator dropping service has thus fluctuated as follows:

- October 1, 2015 – February 28, 2018: \$6.90 per MW/month (Previous Charge)
- December 20, 2016 – September 30, 2017: \$6.79 per MW/month (Interim Charge)
- October 1, 2017 – present: \$9.64 per MW/month (New Charge)

The new charge of \$9.64 per MW/month will be reflected in Turlock's monthly transmission bills starting March 1, 2018. Turlock's March transmission bill will also reflect a true-up from December 2016 through February 2018 to reflect the changes in the charge for generator dropping. This true-up is summarized in the table below:

<b>Refund using Interim Charge minus Previous Charge (from period of December 20, 2016 to September 30, 2017)</b>	<b>Charge using New Charge minus Previous Charge (from period of October 1, 2017 to February 28, 2018)</b>	<b>One time amount to be billed using New Charge on Turlock's March 2018 transmission bill</b>
[\$6.79 - \$6.90] x 9 months and 11 days x 50 MW = - \$51	[\$9.64 - \$6.90] x 5 months x 50 MW = \$685	- \$51 + \$685 = \$634

If you have any questions regarding this information, please contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.03.30  
12:17:22 -0700'

Transmission Account Executive  
Transmission Sales

cc:

Ms. Young Linn, Bonneville Power Administration



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

February 12, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Listed in Table 1 below are the Schedule C Replacement Projects energized from April 2016 to April 2017. Table 1 summarizes the work order numbers, project information, and Turlock Irrigation District's (TID) pro rata shares of the project costs under Contract No. DE-MS79-94BP94523, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date<sup>1</sup></b>	<b>TID Cost Share</b>
00339633	Chief Joseph Substation – Security Enhancements	7/7/2018	\$3,264
00356246	Grizzly Substation – Replace Analog Transfer Trip Equipment	7/21/2018	\$102
00356248	Sand Spring Compensation Station – Replace Analog Transfer Trip Equipment	8/5/2018	\$2,094
00401519	John Day Substation – Station Service Cable Replacement	2/7/2018	\$419
00404279	Fort Rock Compensation Station – Emergency Replacement of Transfer Switch Bank No. 1	7/10/2018	\$1,807

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for work order No. 00401519, it means that the work order was closed, but that the work order and Operating Plan were later amended. Work order No. 00401519 was amended to add the John Day Substation project cost pursuant to section 13(k) of the COA.

The charges for these projects will be included in TID's February transmission bill to be sent in March 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00358697	Malin Substation – Replace Analog Transfer Trip Equipment	2018	Work Order Cancelled
00379615	Malin Substation – Malin Physical Security Enhancements	2016	Not applicable to COA
TBD Alvey 04	Alvey Substation – Replace Line Loss Logic Equipment for Marion Alvey Line	2016, 2018	Replaced by Work Order 00339242
TBD Alvey 05	Alvey Substation – Replace Equipment Related to Line Loss Logic/RAS	2016, 2018	Replaced by Work Order 00339242

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud bpa gov  
Date: 2018 02 12 15 56:41  
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Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Young Linn, Bonneville Power Administration

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 1, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Enclosed for your records are two updated Exhibits: Exhibit F, Revision No. 1 and Exhibit G Revision No. 1 of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94523, between the Bonneville Power Administration and Turlock Irrigation District.

A draft Exhibit F, Revision No. 1 and draft Exhibit G, Revision No. 1 were provided as part of the document packet at the October 26, 2017 3<sup>rd</sup> AC Capacity Owners Annual Meeting.

The primary changes identified under Exhibit F, Revision No. 1 are as follows:

1. Add footnotes to clarify information throughout Exhibit F;
2. Add the Shunt Reactor at Alvey Substation, add the breakers and disconnect switches at Slatt Substation, and update several sections in this Exhibit F to reflect equipment added to the Intertie facilities over the years;
3. Add two disconnect switches at Grizzly Substation (for John Day terminals) and two disconnect switches at Marion Substation (for Buckley and Alvey line terminal) that were all inadvertently omitted from the original Exhibit F;
4. Add interchange meter references to Alvey Substation and Captain Jack Substation, add a Relay House to Alvey Substation, and add a Control House to Grizzly Substation and Malin Substation respectively to clarify treatment for these facilities; and
5. Add the percentages for most of the station general facilities at various substations.

The change under Exhibit G, Revision No. 1 is to update the addition of PacifiCorp and that Turlock Irrigation District is the permanent assignee of Power Resources Cooperative and not Pacific Northwest Generating Cooperative.

If you have any questions regarding this information, please contact me by June 18, 2018 at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.06.01 15:14:21 -07'00'

Transmission Account Executive  
Transmission Sales

cc:  
Ms. Young Linn, Bonneville Power Administration

2 Enclosures

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100

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<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b>		
<u>Bank No. 5 Terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100
Station General	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100
• MOD D#5035	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100
Station General <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

11. **Marion 500 kV**

Buckley Line Terminal

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INERTIE</u>
<ul style="list-style-type: none"> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices</li> </ul>	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
<ul style="list-style-type: none"> <li>• Breaker D#5018</li> <li>• Breaker D#5021</li> <li>• MOD D#5019</li> <li>• MOD &amp; Ground Switch D#5020/7022</li> <li>• MOD D#5022</li> <li>• Associated Terminal Arresters</li> <li>• Associated Line PTs</li> </ul>	100	50
	100	100
	100	50
	100	100
	100	100
	100	100
	100	100
<u>Coyote Springs Line Terminal</u>		
<ul style="list-style-type: none"> <li>• Breaker D#5043</li> <li>• Breaker D#5045</li> <li>• MOD &amp; Ground Switch D#5023/7847</li> <li>• MOD D#5044</li> <li>• MOD D#5046</li> <li>• Associated Terminal Arresters</li> <li>• Associated Line PTs</li> </ul>	100	50
	100	100
	100	100
	100	50
	100	100
	100	100
	100	100
	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

July 24, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Pursuant to Section 13(k) and 9(b)(2)(A)(v) of the PNW AC Intertie Capacity Ownership Agreement (COA), Contract No. DE-MS79-94BP94523 between Turlock Irrigation District (Turlock) and the Bonneville Power Administration (BPA), I have enclosed for your review the amendment to the FY 2017 Operating Plan (Amendment).

The Amendment updates Schedules A, B, D, E, F, and G of the FY 2017 Operating Plan to reflect updated costs for FY 2017 and modifies the monthly charge related to those costs. Schedule ABFG is included to support Schedules A, B, F and G of the Operating Plan.

Each year's Operating Plan is used to forecast each Capacity Owner's allocation of qualifying expenses based on their ownership share. This monthly charge is included on each Capacity Owner's transmission bill. After the end of each fiscal year, the Operating Plan is amended to reflect actual, rather than forecasted costs. The pro-rata share of the difference between forecasted and actual costs is reflected as a one-time charge, or credit, on each Capacity Owner's transmission bill.

The actual costs are included in the "Actual" column of the Schedules A, B, D, E, F and G of the Amendment. The actual costs in Schedules D (General Plant), and E (Other-PacifiCorp) are *higher* than the forecast.

The other schedules show that actual costs in Schedules A (Operations), B (Maintenance), F (Contract and Rates), and G (Transmission Scheduling) are *lower* than the forecast.

Overall for FY 2017, actual costs for the BPA portion of the Third AC Intertie were *higher* than the forecasted costs communicated in the October 2, 2015 letter. The costs are higher by \$570,480, as shown on the summary page of the Amendment. The actual costs are \$233 per MW-month, compared to the forecasted costs of \$219 per MW-month in the 2015 letter.

The FY 2017 charge for Turlock will be \$7,987 plus \$422 interest, calculated pursuant to Section 9(b)(2)(A)(vi) of the COA. Thus, Turlock's total one time true-up charge will be \$8,409, in its July 2018 transmission bill to be sent in August 2018.

This letter also serves as notice of an amendment to add five Work Orders to the Schedule Cs of this FY 2017 Operating Plan. Note that one of the Work Orders listed below has been billed and the other was part of a cancellation notice.

<b>Work Order Number / FY 17 Operating Plan Page</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs Estimate as of the Date of this Letter</b>
00248443/ Page 6	Alvey Substation – Install a New Shunt Reactor	FY 2012, FY 2013, FY 2014, FY 2015, FY 2017	\$10,000,000
00329379/ Page 14	Marion-Alvey No. 1 – Access Road Improvements	FY 2017, FY 2018	\$729,000
00356246/ Page 28	Grizzly Substation – Replace Analog Transfer Trip Equipment	FY 2017, FY 2018	See Billing notice sent on February 12, 2018
00358697/ Page 29	Malin Substation – Analog Transfer Trip	FY 2017	See Cancellation notice sent on February 12, 2018

This letter also provides notice of amendment to the Schedule Cs of FY 2017 Operating Plan to increase the estimated cost related to the following Work Order:

1. Work Order 00339242 at Alvey Substation (Remedial Action Scheme) was originally forecasted for \$250k. Currently the estimated direct costs are nearly \$1.3M and preliminary notes state that the BPA cost share percentage will be 50%. Please refer to the WO Database Projections Report (June 12, 2018). The increased costs were originally provided in a report from PacifiCorp in April 2017. BPA's information from 2016, regarding the increase, is that the scope was broadened for changes in design, materials and construction.

In addition, we have updated the Schedule C, Table of Contents, to reflect current Work Order information, such as: cancelled Work Orders, Work Orders added to the FY 2017 Operating Plan, updates to Work Order completion dates, and Work Order descriptions.

Please review this information and respond through the Capacity Owners Committee (Committee) as provided in Sections 13(d), (e), and (m) of the COA. If the Committee recommends a revision(s) to any forecast cost, actual cost or General Plant Cost, in this Amendment, BPA will respond as provided in Section 13 of the COA. Pursuant to Sections 13(e) and (m) of the COA, if BPA does not receive a recommendation from the

Committee by August 20, 2018, the addition of these projects, together with the increased cost, will be considered accepted.

If you have any questions regarding this information, please contact me at (360) 619-6704.

Sincerely,

On behalf of J. Diego Ochoa  
Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:  
Ms. Young Linn, Bonneville Power Administration



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

August 17, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Listed in Table 1 below are the Schedule C Replacement Projects energized from November 2014 to December 2017. Table 1 summarizes the work order numbers, project information, and Turlock Irrigation District's (Turlock) pro rata shares of the project costs under Contract No. DE-MS79-94BP94523, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule C's referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Documents are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date<sup>1</sup></b>	<b>Turlock Cost Share</b>
00248443	Alvey Substation - Install a New Shunt Reactor	10/11/2018	\$189,062
00329379	Marion-Alvey No. 1 - Access Road Improvements	8/19/2018	\$4,000
00335841	Marion-Alvey No. 1 - Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	12/19/2018	\$22,507
00339242	Alvey Substation - Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	10/13/2018	\$12,966

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for Work Order No. 00348163, it means that the Work Order was closed, but that the Work Order and Operating Plan were later amended. Work Order No. 00348163 was amended to add the John Day Substation project cost pursuant to Section 13(k) of the COA.

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date</b>	<b>Turlock Cost Share</b>
00348163	Grizzly-Captain Jack No. 1 - Land Rights Acquisition for Access Road, Structure 156/1	4/11/2018	\$1,372
00381350	Summer Lake Substation - Upgrade Engine Generator	1/6/2019	\$6,132
00396160	Dixonville Substation - 500 kV Relay Replacements to Meridian (PAC Project)	2/21/2019	\$7,966
00396161	Meridian Substation - 500 kV Relay Replacements to Dixonville (PAC Project)	2/21/2019	\$6,940

The charges for these projects will be included in Turlock’s August transmission bill to be sent in September 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00356249	Sycan Compensation Station - Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	2016, 2019	Not Applicable
00432972	Malin Substation - SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	2019	Work Order cancelled
00449853	Ashe-Marion No. 2 - Emergency Replacement of Access Road	2019	Work Order cancelled
TBD Malin 13	Malin Substation - Relay Replacement on the Round Mt. No. 1 line	2015, 2017	Combined with TBD Malin 14 project
TBD Malin 14	Malin Substation - Relay Replacement on the Round Mt. No. 2 line	2015, 2016, 2017	Combined into BPA Work Order #00374787
TBD Summerlake 03	Summerlake Substation - Work on BPA Relays on the Grizzly line	2015, 2017	Combined into BPA Work Order #00322042



Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
TBD Sycan 01	Sycan Compensation Station - Replace Station Battery	2018	Combined into Work Order #00423702
TBD Sycan 02	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 03	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 04	Sycan Compensation Station - Update Grounding Equipment	2018	Combined into Work Order #00423702

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.08.17 14:33:17  
-07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Young Linn, Bonneville Power Administration

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

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**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to**  
**PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

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**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-94BP94523.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month.

The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

We will have a comprehensive discussion at the November 1, 2018 Annual Meeting. Prior to that meeting, please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa".

JUAN OCHOA  
2018.09.28  
14:44:21 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Ms. Young Linn, Bonneville Power Administration

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	\$10,514,691	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

**EXHIBIT I**

**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39



**Capacity Ownership Agreement  
 FY 2020  
 Operating Plan  
 EXHIBIT I  
 Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
**FY 2020**  
**Operating Plan**  
**EXHIBIT I**  
**Schedule C Table of Contents**

*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** 00335885  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 152/2  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** 00466505  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2021  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 12  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey Dixonville 01  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Alvey-Dixonville  
**Exhibit F Section:** A.1. Alvey-Dixonville 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

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Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.6. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

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Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)						
	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$2,235,000	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018
<b>General Plant</b>						
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	53,294,126
<b>Total General Plant</b>						<b>1,297,309,592</b>

↑ To D-1

*[To Schedule D, Line 1]*

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<b>Budget Item</b>	<b>General Plant</b>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	1,271,675	113,150	1,384,825	105,012	1,489,837
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	(1,504,469)		(1,651,612)		(1,783,378)
	8,117,177		8,403,335		8,906,982

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

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**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020**  
**Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$351,026</b></u>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 21, 2018

In reply refer to: TSE/TPP-2

Mr. James Farrar, Director  
Energy Markets  
Turlock Irrigation District  
333 E. Canal Drive  
Turlock, CA 95381

Subject: Contract No. DE-MS79-94BP94523

Dear Mr. Farrar:

Listed in Table 1 below is the Schedule C Replacement Project energized in June 2017. Table 1 summarizes the work order number, project information, and Turlock Irrigation District's (Turlock) pro rata share of the project costs under Contract No. DE-MS79-94BP94523, PNW AC Intertie Capacity Ownership Agreement. The Schedule C referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Documents are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date</b>	<b>Turlock Cost Share</b>
00340156	Marion Substation – Transfer Trip Replacement	11/21/2018	\$2,937

The charge for this project will be included in Turlock's November transmission bill to be sent in December 2018.

The Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00379612	Grizzly Substation – Physical Security Project	2017	General Plant
00381830	Malin Substation – Replacement of Communication Battery Charger	2017	General Plant
00381831	Fort Rock Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00381833	Sycan Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00384207	Buckley Substation – Replace Line Relay on Slatt Terminal	2019	Not Applicable
TBD Dixonville 05	Dixonville Substation – Regravel Yard	2018, 2019	Not Applicable

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.11.21  
11:53:03 -08'00'

Transmission Account Executive  
Transmission Sales

3 Enclosures

cc:

Ms. Young Linn, Bonneville Power Administration

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

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**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100

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<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b>		
<u>Bank No. 5 Terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100
Station General	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100
• MOD D#5035	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100
Station General <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

11. **Marion 500 kV**

Buckley Line Terminal

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<ul style="list-style-type: none"> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices</li> </ul>	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
<ul style="list-style-type: none"> <li>• Breaker D#5018</li> <li>• Breaker D#5021</li> <li>• MOD D#5019</li> <li>• MOD &amp; Ground Switch D#5020/7022</li> <li>• MOD D#5022</li> <li>• Associated Terminal Arresters</li> <li>• Associated Line PTs</li> </ul>	100	50
	100	100
	100	50
	100	100
	100	100
	100	100
	100	100
<u>Coyote Springs Line Terminal</u>		
<ul style="list-style-type: none"> <li>• Breaker D#5043</li> <li>• Breaker D#5045</li> <li>• MOD &amp; Ground Switch D#5023/7847</li> <li>• MOD D#5044</li> <li>• MOD D#5046</li> <li>• Associated Terminal Arresters</li> <li>• Associated Line PTs</li> </ul>	100	50
	100	100
	100	100
	100	50
	100	100
	100	100
	100	100
	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

<b>PSE</b>	Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company
<b>Seattle</b>	The City of Seattle, City Light Department aka Seattle City Light
<b>Turlock</b>	Turlock Irrigation District
<b>Tacoma Power</b>	City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power
<b>Snohomish</b>	Public Utility District No. 1 of Snohomish County
<b>PacifiCorp</b>	PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

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**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

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**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line			Less		
	No.	Forecast	Actual	General	Adjusted	Difference
				Plant	Actuals	
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,764	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

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**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

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**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

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**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> Percent (%) applied to PNWAC (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> Intertie Contract Proration refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> Other Proration occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> Station General is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

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**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

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**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

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**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	<b>Total from Schedule C:</b>	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	<b>Schedule C Total After Proration:</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
9	<b>Customer Percentage Applied from Exhibit G</b>									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	<b>Exhibit G</b>									
19	<b>Customer</b>	<b>Percentage</b>								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

**Interest Calculation  
Turlock Irrigation District  
9/30/2016-5/31/2018**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/30/2016	5/31/2018		609	\$7,987	\$421.68
9/30/2016	10/30/2016	3.064%	31		20.78
10/31/2016	11/29/2016	3.065%	30		20.12
11/30/2016	12/30/2016	3.079%	31		20.89
12/31/2016	1/30/2017	3.086%	31		20.93
1/31/2017	2/27/2017	3.091%	28		18.94
2/28/2017	3/30/2017	3.096%	31		21.00
3/31/2017	4/29/2017	3.108%	30		20.40
4/30/2017	5/30/2017	3.121%	31		21.17
5/31/2017	6/29/2017	3.130%	30		20.54
6/30/2017	7/30/2017	3.143%	31		21.32
7/31/2017	8/30/2017	3.159%	31		21.43
8/31/2017	9/29/2017	3.170%	30		20.81
9/30/2017	10/30/2017	3.208%	31		21.76
10/31/2017	11/29/2017	3.216%	30		21.11
11/30/2017	12/30/2017	3.225%	31		21.88
12/31/2017	1/30/2018	3.237%	31		21.96
1/31/2018	2/27/2018	3.239%	28		19.85
2/28/2018	3/30/2018	3.262%	31		22.13
3/31/2018	4/29/2018	3.281%	30		21.54
4/30/2018	5/31/2018	3.302%	32		23.12
			<b>609</b>		<b>421.68</b>

"This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release."

**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

$\$9,655,061 / 3450 \text{ MW} / 12 \text{ Months} =$ 
 $\$233.21 / \text{MW-month}$   
**Rounded to \$233 for whole-dollar billing**

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.



**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

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Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Operating Revenues</b>						
<b>Sales</b>						
<b>Network</b>						
1    Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617	\$ 133,535	102%
2    Other Network	436,310	461,684	451,685	442,038	446,492	101%
3    Intertie	73,891	78,630	76,368	76,949	76,257	99%
4    Other Direct Sales	263,312	270,592	263,557	265,520	265,824	100%
5 <b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262	41,491	96%
6 <b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945	128,126	105%
7 <b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>	<b>1,091,725</b>	<b>101%</b>
<b>Operating Expenses</b>						
<b>Transmission Operations</b>						
<b>System Operations</b>						
8    INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701	9,903	93%
9    POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945	13,722	98%
10   CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009	23,567	94%
11   TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979	8,029	80%
12   STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118	2,028	96%
13   SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081	23,444	97%
14 <b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>	<b>80,693</b>	<b>94%</b>
<b>Scheduling</b>						
15   RESERVATIONS	1,167	1,383	1,227	1,044	1,211	116%
16   PRE-SCHEDULING	382	276	284	284	211	74%
17   REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929	5,062	103%
18   SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182	3,656	87%
19   SCHEDULING AFTER-THE-FACT	273	289	277	277	305	110%
20 <b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>	<b>10,445</b>	<b>97%</b>
<b>Marketing and Business Support</b>						
21   TRANSMISSION SALES	2,299	2,775	2,834	2,621	2,524	96%
22   MKTG TRANSMISSION FINANCE	-	-	-	-	-	0%
23   MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660	4,465	96%
24   MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116	2,093	99%
25   MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651	7,948	119%
26 <b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>	<b>17,030</b>	<b>106%</b>
27   EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753	16,908	95%
28   LEGAL SUPPORT	2,611	3,548	1,641	1,962	2,304	117%
29   TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522	9,847	73%
30   AIRCRAFT SERVICES	1,094	2,230	2,489	1,839	882	48%
31   LOGISTICS SERVICES	6,685	4,488	4,354	5,151	5,861	114%
32   SECURITY ENHANCEMENTS	889	716	561	561	547	98%
33 <b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>	<b>36,350</b>	<b>89%</b>
34 <b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>	<b>\$ 144,518</b>	<b>94%</b>

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling

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Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TS&D PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	50.84% \$ 59,480,947.02
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	16.22% \$ 18,970,654.33
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	8562030295.78% \$ 121,417,590.42 Total Allocation incl. Contr. & Rates. 8562030292.00% \$ 116,994,457.86 Total Allocations
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

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Run Date/Time: November 07, 2017 06:37  
 Data Source: EPM Data Warehouse  
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	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

- <1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.
- <2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.
- <3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.
- <4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
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**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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**Capacity Ownership Agreement**  
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**Schedule C Table of Contents**

This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

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Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

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Exhibit I Page 6  
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*Below is information about work orders added or removed, acronyms and further information.*

<b>Work Order Number(s) ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

<b>Work Order Number(s) REMOVED or to be REMOVED</b>	<b>Correspondence Notes</b>	<b>Page Number</b>
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number



**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

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- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
FY2017 OPERATING PLAN**

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**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	11	<u><u>\$3,266,580</u></u>	<u><u>\$2,485,604</u></u>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
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- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

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<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
Total General Plant	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>


<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			<b>1,260,992,898</b>

To D-1  


Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 TOTAL GENERAL PLANT		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

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## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$397,813.51</b></u>	<u><b>\$381,573.21</b></u>	<u><b>(\$16,240.30)</b></u>

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## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

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**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	\$40,975,439	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	\$40,975,439	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	100.00%	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	\$40,975,439	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	2.27%	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	\$928,654	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	\$1,431,906	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	\$2,360,560	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	\$163,326,808	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	1.45%	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	\$11,009,818	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	\$159,125	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	\$66,061,129	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	\$954,781	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b>\$3,474,466</b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan  
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**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
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Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43



**Capacity Ownership Agreement**  
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*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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**Project Work Order:** 00335885  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 152/2  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	_____	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4	_____	_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** 00466505  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2021  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 12  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.6. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>							<b>1,297,309,592</b>

↑ To D-1

[To Schedule D, Line 1]

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	1,271,675	113,150	1,384,825	105,012	1,489,837
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	(1,504,469)		(1,651,612)		(1,783,378)
	8,117,177		8,403,335		8,906,982

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		<b>169,161,272</b>

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020**  
**Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
 Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Department of Energy**  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

SEP 26 1994

In reply refer to: PMT

Amendatory Agreement No. 1  
Contract No. DE-MS79-94BP94524

Mr. Steven J. Klein  
Light Division Superintendent  
City of Tacoma, Department of Public Utilities  
3628 South 35th Street  
Tacoma, WA 98411

Dear Mr. Klein:

This letter constitutes an agreement between the United States of America, Department of Energy, acting by and through the Bonneville Power Administration (Bonneville) and the City of Tacoma, Department of Public Utilities (Tacoma), a municipal corporation operating and existing under the laws of the State of Washington, to amend Contract No. DE-MS79-94BP94524 (Capacity Ownership Agreement), executed by Tacoma on September 23, 1994. This letter agreement shall be effective upon the Effective Date of the Capacity Ownership Agreement and shall have the same term as the Capacity Ownership Agreement.

Bonneville and Tacoma agree that subparagraphs 3(b)(2)(A) and 3(b)(2)(B) in the Capacity Ownership Agreement shall be deleted and the following language shall be substituted:

- (A) Tacoma may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by Tacoma. Tacoma agrees to provide Bonneville access to its available unused Scheduling Share on any hour under terms and conditions comparable to those provided by Bonneville to Tacoma under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto.
- (B) Tacoma hereby waives any rights it may have under Exhibit B of the Long-Term Intertie Access Policy as Exhibit B existed on June 30, 1994, and any rights to access under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto. Tacoma does not waive any other rights it may have to transmission access on Bonneville's PNW-PSW Intertie including but not limited to: (1) firm transmission service on Bonneville's PNW-PSW Intertie; (2) transmission service under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or

amendments thereto; or (3) any rights to request an order from the Federal Energy Regulatory Commission under Section 211, or any other applicable section, of the Federal Power Act or any successor statute, requiring Bonneville to provide transmission service to Tacoma consistent with the above.

Tacoma and Bonneville agree to negotiate in good faith the terms and conditions under which Tacoma shall be able to access Bonneville's PNW-PSW Intertie under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy as it existed on June 30, 1994.

In order for Bonneville to implement the changes to (A) and (B) reflected above, a new paragraph 3(b)(2)(D) needs to be added to the Capacity Ownership Agreement. The language follows:

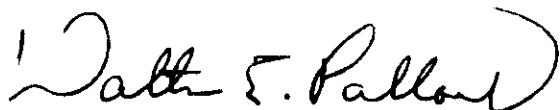
- (D) Bonneville shall not be obligated to provide wheeling under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto, until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to Tacoma or until December 27, 1994, whichever occurs sooner.

Further, the following amendments to subsection 4(a) are made. Delete the phrase "(and only Tacoma)" in the first sentence. Before the first sentence, insert the following three sentences: "For purposes of this section 4, all references to Tacoma shall mean Tacoma or its designee. Any such designee shall be identified in writing by Tacoma to Bonneville. Only one entity may submit schedules on Tacoma's behalf at any one time."

In addition, the following amendment to Exhibit E, paragraph B, is made. Delete the phrase "subparagraph 3(b)(1)(C)" and replace it with the phrase "subparagraph 3(b)(1)(C) or 3(b)(2)(B)."

If the foregoing terms are acceptable to Tacoma, please sign and return one copy of this letter agreement. The remaining copy is for your files.

Sincerely,



Walter E. Pollock  
Group Vice President, Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

ACCEPTED:

CITY OF TACOMA, DEPARTMENT OF PUBLIC UTILITIES

By 


Name Steven J. Klein  
(Print/Type)

Title Deputy Director/Light Superintendent

Date 10 / 27 / 94

Effective Date September 27, 1994

(PMLAN-W:\PMT\CONTRACT\LTR\_AGMT\94524AM1.DOC)

**Approved as to form & legalit**  
  
**Chief Asst. City Attorney**



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 30, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Section 11(b)(1) of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94524 (Capacity Ownership Agreement), between the Bonneville Power Administration (BPA) and City of Tacoma, Department of Public Utilities, Light Division (Tacoma) requires Tacoma to participate in the Remedial Action Scheme (RAS) necessary to maintain Tacoma's share of intertie capacity.

The RAS includes generator dropping to support north to south schedules on the AC Intertie. Tacoma has historically purchased generator dropping RAS service from BPA to fulfill that portion of its obligation under the Capacity Ownership Agreement.

BPA will continue to provide generator dropping service until such time as Tacoma arranges to self-provide generator dropping to meet its obligations. If Tacoma elects to provide its own generator dropping, Tacoma must provide BPA with at least two years notice to allow time for necessary system adjustments. Consistent with Section 11(b)(1) of the Capacity Ownership Agreement, Tacoma would also need to demonstrate to BPA that it has the ability to self-provide generator dropping.

BPA has updated its charge for generator dropping service to account for two separate changes affecting its cost of providing the service: the 2016 upgrade of the DC Intertie and BPA's updated generator dropping rate set in the BP-18 Rate Case. The upgrade to the DC Intertie reduced the amount of generator dropping required because the DC Intertie rating went from 3,100 MW to 3,220 MW. The BP-18 Rate Case increased the cost of providing generator dropping service to reflect 1) the increase in O&M costs; 2) Grand Coulee 3rd power house outages; and 3) an increase in the Handy Whitman cost index.

The charge for generator dropping service has thus fluctuated as follows:

- October 1, 2015 – February 28, 2018: \$6.90 per MW/month (Previous Charge)
- December 20, 2016 – September 30, 2017: \$6.79 per MW/month (Interim Charge)
- October 1, 2017 – present: \$9.64 per MW/month (New Charge)

The new charge of \$9.64 per MW/month will be reflected in Tacoma's monthly transmission bills starting March 1, 2018. Tacoma's March transmission bill will also reflect a true-up from December 2016 through February 2018 to reflect the changes in the charge for generator dropping. This true-up is summarized in the table below:

<b>Refund using Interim Charge minus Previous Charge (from period of December 20, 2016 to September 30, 2017)</b>	<b>Charge using New Charge minus Previous Charge (from period of October 1, 2017 to February 28, 2018)</b>	<b>One time amount to be billed using New Charge on Tacoma's March 2018 transmission bill</b>
$[\$6.79 - \$6.90] \times 9 \text{ months and } 11 \text{ days} \times 41 \text{ MW} = -\$42$	$[\$9.64 - \$6.90] \times 5 \text{ months} \times 41 \text{ MW} = \$562$	$-\$43 + \$575 = \$520$

If you have any questions regarding this information, please contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.03.30  
12:17:37 -07'00'

Transmission Account Executive  
Transmission Sales

cc:

Mr. Bill Dickens, City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

January 28, 2019

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Enclosed please find proposed amendments to the FY 2015 through FY 2020 Operating Plans. Sections 9(b)(2)(B)(iii) and 13(k) of the PNW AC Intertie Capacity Ownership Agreement (COA) allow operating plans to be amended to add replacement costs, or to increase forecasted costs. For the following Work Orders, Actual or Updated Costs exceed the Forecasted Costs by at least five percent. These Work Orders were included in prior operating plans, so the proposed Amendments to the Operating Plans below reflect the additional costs.

**Table 1**

Work Order No. for Schedule C	Facility – Project Information	FY Operating Plans to be Amended	Forecasted Costs	Actual or Updated Costs <sup>1</sup>
00297236	Ashe-Marion No. 2 - Replace Spacer-Dampers (225.3 miles)	2016, 2018, 2019, 2020	\$4,404,125	\$4,750,000
TBD Dixonville 04	Dixonville Substation - Replace Series Capacitor Controls (PAC Project)	2015, 2016, 2017, 2018, 2019, 2020	\$600,000	\$972,000
TBD Grizzly 02	Grizzly Substation - Replace SCADA/Sequential Event Recorder (BPA Project)	2018, 2020	\$1 <sup>2</sup>	\$290,000
TBD Malin 18	Replace Sequential Event Recorder	2018, 2020	\$1 <sup>2</sup>	\$1,300,000

<sup>1</sup> The costs listed under the “Actual or Updated Costs” column are Direct Costs (without Indirect Costs or AFUDC costs). Please note that for work orders with the interim designation of “TBD”, the actual costs are not available at this time so the information listed in Table 1 is an updated cost (rounded).

<sup>2</sup> For the \$1 listed under the column “Forecasted Costs”, this was a placeholder representing that there will be a future cost. As of the date of this letter, we are providing updated information on the costs.

The following Work Orders are proposed to be *added* to the Operating Plans listed below.

**Table 2**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs as of the Date of this Letter</b>	<b>Work Order Approved &amp; Work Order Closed Dates</b>
00374787	Malin Substation - Replace Round Mountain Relays	2015, 2016, 2017, 2018	\$970,000	11/30/2014 & 1/17/2018
00439779	Ashe-Marion No. 2 - Emergency Replacement of Conductor	2017, 2018, 2019	\$4,300,000	3/7/2017 & 2/22/2018
00440381	Slatt Substation - Emergency Replacement of Breaker	2018, 2019	\$1,100,000	3/24/2017 & 11/27/2017

If you would like to recommend a revision to any forecasted cost or dispute the addition of a project, please do so through the Capacity Owner Committee (Committee). Sections 13(d), 13(e) and 13(m) of the COA detail the process and requirements. If we receive no recommendation from the Committee by February 25, 2019, the addition of these projects, as well as increased costs, will be considered accepted on February 25, 2019 according to the contract terms (See Sections 13(e) and 13(m)).

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2019.01.28  
14:57:18 -08'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Mr. Rick Applegate, The City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, The City of Tacoma, Department of Public Utilities, Light Division

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line		Less			
	No.	Forecast	Actual	General	Adjusted	Difference
				Plant	Actuals	
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,034,679				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$517,340				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,764				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,574,783				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

February 12, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Listed in Table 1 below are the Schedule C Replacement Projects energized from April 2016 to April 2017. Table 1 summarizes the work order numbers, project information, and City of Tacoma, Department of Public Utilities, Light Division's (Tacoma) pro rata shares of the project costs under Contract No. DE-MS79-94BP94524, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date <sup>1</sup>	Tacoma Cost Share
00339633	Chief Joseph Substation – Security Enhancements	7/7/2018	\$2,565
00356246	Grizzly Substation – Replace Analog Transfer Trip Equipment	7/21/2018	\$80
00356248	Sand Spring Compensation Station – Replace Analog Transfer Trip Equipment	8/5/2018	\$1,645
00401519	John Day Substation – Station Service Cable Replacement	2/7/2018	\$329
00404279	Fort Rock Compensation Station – Emergency Replacement of Transfer Switch Bank No. 1	7/10/2018	\$1,420

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for work order No. 00401519, it means that the work order was closed, but that the work order and Operating Plan were later amended. Work order No. 00401519 was amended to add the John Day Substation project cost pursuant to section 13(k) of the COA.

The charges for these projects will be included in Tacoma's February transmission bill to be sent in March 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00358697	Malin Substation – Replace Analog Transfer Trip Equipment	2018	Work Order Cancelled
00379615	Malin Substation – Malin Physical Security Enhancements	2016	Not applicable to COA
TBD Alvey 04	Alvey Substation – Replace Line Loss Logic Equipment for Marion Alvey Line	2016, 2018	Replaced by Work Order 00339242
TBD Alvey 05	Alvey Substation – Replace Equipment Related to Line Loss Logic/RAS	2016, 2018	Replaced by Work Order 00339242

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud bpa.gov  
Date: 2018.02.12 15:57:21  
-08'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Mr. Bill Dickens, City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

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**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

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**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 1, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Enclosed for your records are two updated Exhibits: Exhibit F, Revision No. 1 and Exhibit G Revision No. 1 of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94524, between the Bonneville Power Administration and City of Tacoma, Department of Public Utilities, Light Division.

A draft Exhibit F, Revision No. 1 and draft Exhibit G, Revision No. 1 were provided as part of the document packet at the October 26, 2017 3<sup>rd</sup> AC Capacity Owners Annual Meeting.

The primary changes identified under Exhibit F, Revision No. 1 are as follows:

1. Add footnotes to clarify information throughout Exhibit F;
2. Add the Shunt Reactor at Alvey Substation, add the breakers and disconnect switches at Slatt Substation, and update several sections in this Exhibit F to reflect equipment added to the Intertie facilities over the years;
3. Add two disconnect switches at Grizzly Substation (for John Day terminals) and two disconnect switches at Marion Substation (for Buckley and Alvey line terminal) that were all inadvertently omitted from the original Exhibit F;
4. Add interchange meter references to Alvey Substation and Captain Jack Substation, add a Relay House to Alvey Substation, and add a Control House to Grizzly Substation and Malin Substation respectively to clarify treatment for these facilities; and
5. Add the percentages for most of the station general facilities at various substations.

The change under Exhibit G, Revision No. 1 is to update the addition of PacifiCorp and that Turlock Irrigation District is the permanent assignee of Power Resources Cooperative and not Pacific Northwest Generating Cooperative.

If you have any questions regarding this information, please contact me by June 18, 2018 at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.06.01 15:14:40 -07'00'

Transmission Account Executive  
Transmission Sales

cc:

Mr. Bill Dickens, City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division

2 Enclosures



*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		

1. **Alvey 500 kV Switchyard**

Bank No. 5 Terminal

• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100

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<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100

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<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	100
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line</u>		
<u>Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5035	100	100
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General <sup>7</sup>	60	100
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100

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<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the		

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

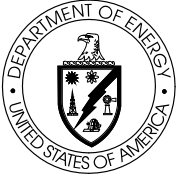
**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

July 24, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Pursuant to Section 13(k) and 9(b)(2)(A)(v) of the PNW AC Intertie Capacity Ownership Agreement (COA), Contract No. DE-MS79-94BP94524 between City of Tacoma, Department of Public Utilities, Light Division (Tacoma) and the Bonneville Power Administration (BPA), I have enclosed for your review the amendment to the FY 2017 Operating Plan (Amendment).

The Amendment updates Schedules A, B, D, E, F, and G of the FY 2017 Operating Plan to reflect updated costs for FY 2017 and modifies the monthly charge related to those costs. Schedule ABFG is included to support Schedules A, B, F and G of the Operating Plan.

Each year's Operating Plan is used to forecast each Capacity Owner's allocation of qualifying expenses based on their ownership share. This monthly charge is included on each Capacity Owner's transmission bill. After the end of each fiscal year, the Operating Plan is amended to reflect actual, rather than forecasted costs. The pro-rata share of the difference between forecasted and actual costs is reflected as a one-time charge, or credit, on each Capacity Owner's transmission bill.

The actual costs are included in the "Actual" column of the Schedules A, B, D, E, F and G of the Amendment. The actual costs in Schedules D (General Plant), and E (Other-PacifiCorp) are *higher* than the forecast.

The other schedules show that actual costs in Schedules A (Operations), B (Maintenance), F (Contract and Rates), and G (Transmission Scheduling) are *lower* than the forecast.

Overall for FY 2017, actual costs for the BPA portion of the Third AC Intertie were *higher* than the forecasted costs communicated in the October 2, 2015 letter. The costs are higher by \$570,480, as shown on the summary page of the Amendment. The actual costs are \$233 per MW-month, compared to the forecasted costs of \$219 per MW-month in the 2015 letter.



The FY 2017 charge for Tacoma will be \$6,275 plus \$331 interest, calculated pursuant to Section 9(b)(2)(A)(vi) of the COA. Thus, Tacoma's total one time true-up charge will be \$6,606, in its July 2018 transmission bill to be sent in August 2018.

This letter also serves as notice of an amendment to add five Work Orders to the Schedule Cs of this FY 2017 Operating Plan. Note that one of the Work Orders listed below has been billed and the other was part of a cancellation notice.

<b>Work Order Number / FY 17 Operating Plan Page</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs Estimate as of the Date of this Letter</b>
00248443/ Page 6	Alvey Substation – Install a New Shunt Reactor	FY 2012, FY 2013, FY 2014, FY 2015, FY 2017	\$10,000,000
00329379/ Page 14	Marion-Alvey No. 1 – Access Road Improvements	FY 2017, FY 2018	\$729,000
00356246/ Page 28	Grizzly Substation – Replace Analog Transfer Trip Equipment	FY 2017, FY 2018	See Billing notice sent on February 12, 2018
00358697/ Page 29	Malin Substation – Analog Transfer Trip	FY 2017	See Cancellation notice sent on February 12, 2018

This letter also provides notice of amendment to the Schedule Cs of FY 2017 Operating Plan to increase the estimated cost related to the following Work Order:

1. Work Order 00339242 at Alvey Substation (Remedial Action Scheme) was originally forecasted for \$250k. Currently the estimated direct costs are nearly \$1.3M and preliminary notes state that the BPA cost share percentage will be 50%. Please refer to the WO Database Projections Report (June 12, 2018). The increased costs were originally provided in a report from PacifiCorp in April 2017. BPA's information from 2016, regarding the increase, is that the scope was broadened for changes in design, materials and construction.

In addition, we have updated the Schedule C, Table of Contents, to reflect current Work Order information, such as: cancelled Work Orders, Work Orders added to the FY 2017 Operating Plan, updates to Work Order completion dates, and Work Order descriptions.

Please review this information and respond through the Capacity Owners Committee (Committee) as provided in Sections 13(d), (e), and (m) of the COA. If the Committee recommends a revision(s) to any forecast cost, actual cost or General Plant Cost, in this Amendment, BPA will respond as provided in Section 13 of the COA. Pursuant to Sections 13(e) and (m) of the COA, if BPA does not receive a recommendation from the

Committee by August 20, 2018, the addition of these projects, together with the increased cost, will be considered accepted.

If you have any questions regarding this information, please contact me at (360) 619-6704.

Sincerely,

On behalf of J. Diego Ochoa  
Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Mr. Bill Dickens, City of Tacoma, Department of Public Utilities, Light Division

Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

August 17, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Listed in Table 1 below are the Schedule C Replacement Projects energized from November 2014 to December 2017. Table 1 summarizes the work order numbers, project information, and City of Tacoma, Department of Public Utilities, Light Division's (Tacoma) pro rata shares of the project costs under Contract No. DE-MS79-94BP94524, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule C's referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Documents are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date <sup>1</sup>	Tacoma Cost Share
00248443	Alvey Substation - Install a New Shunt Reactor	10/11/2018	\$148,549
00329379	Marion-Alvey No. 1 - Access Road Improvements	8/19/2018	\$3,143
00335841	Marion-Alvey No. 1 - Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	12/19/2018	\$17,684
00339242	Alvey Substation - Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	10/13/2018	\$10,188

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for Work Order No. 00348163, it means that the Work Order was closed, but that the Work Order and Operating Plan were later amended. Work Order No. 00348163 was amended to add the John Day Substation project cost pursuant to Section 13(k) of the COA.

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	Tacoma Cost Share
00348163	Grizzly-Captain Jack No. 1 - Land Rights Acquisition for Access Road, Structure 156/1	4/11/2018	\$1,078
00381350	Summer Lake Substation - Upgrade Engine Generator	1/6/2019	\$4,818
00396160	Dixonville Substation - 500 kV Relay Replacements to Meridian (PAC Project)	2/21/2019	\$6,259
00396161	Meridian Substation - 500 kV Relay Replacements to Dixonville (PAC Project)	2/21/2019	\$5,453

The charges for these projects will be included in Tacoma's August transmission bill to be sent in September 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
00356249	Sycan Compensation Station – Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	2016, 2019	Not Applicable
00432972	Malin Substation – SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	2019	Work Order cancelled
00449853	Ashe-Marion No. 2 – Emergency Replacement of Access Road	2019	Work Order cancelled
TBD Malin 13	Malin Substation – Relay Replacement on the Round Mt. No. 1 line	2015, 2017	Combined with TBD Malin 14 project
TBD Malin 14	Malin Substation – Relay Replacement on the Round Mt. No. 2 line	2015, 2016, 2017	Combined into BPA Work Order #00374787
TBD Summerlake 03	Summerlake Substation – Work on BPA Relays on the Grizzly line	2015, 2017	Combined into BPA Work Order #00322042

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
TBD Sycan 01	Sycan Compensation Station – Replace Station Battery	2018	Combined into Work Order #00423702
TBD Sycan 02	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 03	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 04	Sycan Compensation Station - Update Grounding Equipment	2018	Combined into Work Order #00423702

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.08.17 14:33:54  
-07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Mr. Rick Applegate, City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	<b>\$926,164</b>	<b>(\$1,104,322)</b>
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

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**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

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**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-94BP94524.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month.

The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

We will have a comprehensive discussion at the November 1, 2018 Annual Meeting. Prior to that meeting, please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa".

JUAN OCHOA  
2018.09.28  
14:43:10 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Mr. Rick Applegate, City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.



**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	\$40,975,439	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	\$40,975,439	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	100.00%	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	\$40,975,439	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	2.27%	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	\$928,654	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	\$1,431,906	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	\$2,360,560	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	\$163,326,808	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	1.45%	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	\$11,009,818	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	\$159,125	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	\$66,061,129	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	\$954,781	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b>\$3,474,466</b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

**EXHIBIT I**

**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
 FY 2020  
 Operating Plan  
 EXHIBIT I  
 Schedule C Table of Contents**

Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
**FY 2020**  
**Operating Plan**  
**EXHIBIT I**  
**Schedule C Table of Contents**

*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: 00335885  
 Project Short Description: Land Rights Acquisition for Access Road, Structure 152/2  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie: 25%  
 Estimated Energization Date: 11/15/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401	_____	_____	_____	_____

**Notes:**

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- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00466505  
 Project Short Description: Ground Wire Replacement  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 12  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2019  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** TBD Alvey Dixonville 01  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Alvey-Dixonville  
**Exhibit F Section:** A.1. Alvey-Dixonville 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** TBD Dixonville-Meridian 02  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Dixonville-Meridian  
**Exhibit F Section:** A.6. Dixonville-Meridian 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

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Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESOFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESOFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>							<b>1,297,309,592</b>

↑ To D-1

*[To Schedule D, Line 1]*

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

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 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018	FERC ACCOUNT					2019	FERC ACCOUNT					2020
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019	FERC ACCOUNT					2020
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	<b>239,161,217</b>
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

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**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020**  
**Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 21, 2018

In reply refer to: TSE/TPP-2

Mr. Clay Norris, Power Section Manager  
City of Tacoma, Department of Public Utilities, Light Division  
3628 South 35<sup>th</sup> Street  
Tacoma, WA 98409-3115

Subject: Contract No. DE-MS79-94BP94524

Dear Mr. Norris:

Listed in Table 1 below is the Schedule C Replacement Project energized in June 2017. Table 1 summarizes the work order number, project information, and City of Tacoma, Department of Public Utilities, Light Division's (Tacoma) pro rata share of the project costs under Contract No. DE-MS79-94BP94524, PNW AC Intertie Capacity Ownership Agreement. The Schedule C referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Documents are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	Tacoma Cost Share
00340156	Marion Substation – Transfer Trip Replacement	11/21/2018	\$2,307

The charge for this project will be included in Tacoma's November transmission bill to be sent in December 2018.

The Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
00379612	Grizzly Substation – Physical Security Project	2017	General Plant
00381830	Malin Substation – Replacement of Communication Battery Charger	2017	General Plant
00381831	Fort Rock Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00381833	Sycan Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00384207	Buckley Substation – Replace Line Relay on Slatt Terminal	2019	Not Applicable
TBD Dixonville 05	Dixonville Substation – Regravel Yard	2018, 2019	Not Applicable

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.11.21  
11:58:18 -08'00'

Transmission Account Executive  
Transmission Sales

3 Enclosures

cc:

Mr. Rick Applegate, City of Tacoma, Department of Public Utilities, Light Division  
Ms. Miki Foster, City of Tacoma, Department of Public Utilities, Light Division

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		

1. **Alvey 500 kV Switchyard**

Bank No. 5 Terminal

• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100

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<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100

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<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	100
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line</u>		
<u>Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5035	100	100
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General <sup>7</sup>	60	100
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the		

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville- Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

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**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764	_____	_____	_____	_____
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

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**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

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**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

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**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

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**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

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**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

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**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

**Interest Calculation  
Tacoma Power  
9/30/2016-5/31/2018**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/30/2016	5/31/2018		609	\$6,275	\$331.31
9/30/2016	10/30/2016	3.064%	31		16.33
10/31/2016	11/29/2016	3.065%	30		15.81
11/30/2016	12/30/2016	3.079%	31		16.41
12/31/2016	1/30/2017	3.086%	31		16.45
1/31/2017	2/27/2017	3.091%	28		14.88
2/28/2017	3/30/2017	3.096%	31		16.50
3/31/2017	4/29/2017	3.108%	30		16.03
4/30/2017	5/30/2017	3.121%	31		16.63
5/31/2017	6/29/2017	3.130%	30		16.14
6/30/2017	7/30/2017	3.143%	31		16.75
7/31/2017	8/30/2017	3.159%	31		16.83
8/31/2017	9/29/2017	3.170%	30		16.35
9/30/2017	10/30/2017	3.208%	31		17.10
10/31/2017	11/29/2017	3.216%	30		16.59
11/30/2017	12/30/2017	3.225%	31		17.19
12/31/2017	1/30/2018	3.237%	31		17.25
1/31/2018	2/27/2018	3.239%	28		15.59
2/28/2018	3/30/2018	3.262%	31		17.39
3/31/2018	4/29/2018	3.281%	30		16.92
4/30/2018	5/31/2018	3.302%	32		18.17
			<b>609</b>		<b>331.31</b>

"This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release."

**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

$\$9,655,061 / 3450 \text{ MW} / 12 \text{ Months} =$ 
 $\$233.21 / \text{MW-month}$   
**Rounded to \$233 for whole-dollar billing**

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

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Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Operating Revenues</b>						
<b>Sales</b>						
<b>Network</b>						
Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617	\$ 133,535	102%
Other Network	436,310	461,684	451,685	442,038	446,492	101%
<b>Intertie</b>	73,891	78,630	76,368	76,949	76,257	99%
Other Direct Sales	263,312	270,592	263,557	265,520	265,824	100%
<b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262	41,491	96%
<b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945	128,126	105%
<b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>	<b>1,091,725</b>	<b>101%</b>
<b>Operating Expenses</b>						
<b>Transmission Operations</b>						
<b>System Operations</b>						
INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701	9,903	93%
POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945	13,722	98%
CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009	23,567	94%
TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979	8,029	80%
STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118	2,028	96%
SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081	23,444	97%
<b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>	<b>80,693</b>	<b>94%</b>
<b>Scheduling</b>						
RESERVATIONS	1,167	1,383	1,227	1,044	1,211	116%
PRE-SCHEDULING	382	276	284	284	211	74%
REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929	5,062	103%
SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182	3,656	87%
SCHEDULING AFTER-THE-FACT	273	289	277	277	305	110%
<b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>	<b>10,445</b>	<b>97%</b>
<b>Marketing and Business Support</b>						
TRANSMISSION SALES	2,299	2,775	2,834	2,621	2,524	96%
MKTG TRANSMISSION FINANCE	-	-	-	-	-	0%
MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660	4,465	96%
MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116	2,093	99%
MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651	7,948	119%
<b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>	<b>17,030</b>	<b>106%</b>
EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753	16,908	95%
LEGAL SUPPORT	2,611	3,548	1,641	1,962	2,304	117%
TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522	9,847	73%
AIRCRAFT SERVICES	1,094	2,230	2,489	1,839	882	48%
LOGISTICS SERVICES	6,685	4,488	4,354	5,151	5,861	114%
SECURITY ENHANCEMENTS	889	716	561	561	547	98%
<b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>	<b>36,350</b>	<b>89%</b>
<b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>	<b>\$ 144,518</b>	<b>94%</b>

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling

Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

<p>TLM ROW VEG                  \$ 54,759,896                  SUB Maint                  \$ 30,860,406</p>	<p>50.84% \$ 59,480,947.02</p> <p>16.22% \$ 18,970,654.33</p> <p>8562030295.78% \$ 121,417,590.42</p> <p>8562030292.00% \$ 116,994,457.86</p>	<p>\$ 36,509,900.95 SPC+PSC</p> <p>\$ 11,570,907.11 Mtc. Indirects</p> <p>\$ 155,357,995.65 Dir Mtc less Indirects</p> <p>Total Allocation incl. Contr. &amp; Rates.</p> <p>Total Allocations</p>
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Report ID: 0061FY17 Run Date/Time: November 07, 2017 06:37  
 Requesting BL: TRANSMISSION BUSINESS UNIT Data Source: EPM Data Warehouse  
 Unit of Measure: \$ Thousands % of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

- <1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.
- <2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.
- <3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.
- <4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.



**FY 2017 Amended  
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**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost (Lines 8 + 12 + 14)</b>	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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**Capacity Ownership Agreement**  
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**Schedule C Table of Contents**

This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

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Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

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Exhibit I Page 6  
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*Below is information about work orders added or removed, acronyms and further information.*

<b>Work Order Number(s) ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

<b>Work Order Number(s) REMOVED or to be REMOVED</b>	<b>Correspondence Notes</b>	<b>Page Number</b>
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
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**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,266,580</u></u></b>	<b><u><u>\$2,485,604</u></u></b>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
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- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

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<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
Total General Plant	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>


<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			<b>1,260,992,898</b>

To D-1  


Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 52  
 Prepared Date 7/24/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 <b>TOTAL GENERAL PLANT</b>		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

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## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$397,813.51</u></b>	<b><u>\$381,573.21</u></b>	<b><u>(\$16,240.30)</u></b>

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## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

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**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

**EXHIBIT I**

**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
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Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
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*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**FY 2020 Schedule C**

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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Project Work Order: 00335885  
 Project Short Description: Land Rights Acquisition for Access Road, Structure 152/2  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie: 25%  
 Estimated Energization Date: 11/15/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** 00466505  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2021  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey 12  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2019  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.6. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>							<b>1,297,309,592</b>

↑ To D-1

*[To Schedule D, Line 1]*

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



YCID MAR 0 4 2009 @ 10:28am via UPS - mcs

*Your Northwest renewables utility invites you to be a Conservation Sensation.*

March 3, 2009

Via Overnight Mail

Toni Timberman  
Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666

Re: Pacific Northwest AC Intertie Capacity Assignment  
Contract No. DE-MS79-94BP94525

Dear Ms. Timberman,

Please find attached our request to assign Snohomish Pacific Northwest AC Intertie Capacity to Iberdrola Renewables, Inc. effective April 1, 2009.

If you have any questions, please do not hesitate to contact me. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Miles", is written above the typed name.

Anna Miles  
Senior Manager, Power Supply

Attachment: Assignment Letter dated March 2, 2009

MAR 0 5 2009





1000 MAR 04 2009 10:28 AM VIL UPS - 722

Your Northwest renewables utility invites you to be a Conservation Sensation.

March 2, 2009

Bonneville Power Administration  
Attention: Toni Timberman, Senior Account Executive  
P.O. Box 61409  
Vancouver, WA 98666-1409

Re: *Pacific Northwest AC Intertie Capacity Ownership Agreement, BPA  
Contract No. DE-MS79-94BP94525, as amended*

Dear Ms. Timberman:

Pursuant to Section 6(a) of the Pacific Northwest AC Intertie Capacity Ownership Agreement ("Ownership Agreement") between the U.S. Department of Energy acting by and through the Bonneville Power Administration ("BPA") and Public Utility District No. 1 of Snohomish County, Washington ("Snohomish"), I hereby respectfully request approval by BPA of the assignment of Snohomish's Capacity Ownership Share to Iberdrola Renewables, Inc. ("IRI"), including but not limited to the right to:

- (i) Wheel power on behalf of third parties under Section 3(b)(2) of the Ownership Agreement;
- (ii) Schedule power on the PNW AC Intertie under Section 4 of that Agreement; and
- (iii) Participate as the Capacity Owner on the Capacity Owners' Committee under Sections 12 through 16 of that Agreement.

The assignment is being made under the Agreement Assigning Pacific Northwest AC Transmission Service Rights Under the Pacific Northwest AC Intertie Capacity Ownership Agreement ("Assignment Agreement"), executed on February 2, 2009, between Snohomish and IRI. IRI has agreed to act as Snohomish's agent and to participate in the Capacity Owner's Committee under the Pacific Northwest AC Intertie Capacity Ownership Services Agreement between IRI and Snohomish, also executed on February 2, 2009. All capitalized terms used herein have the meaning defined in the Ownership Agreement unless otherwise noted.

Snohomish understands that, in light of the temporary nature of the assignment of its Capacity Ownership Share to IRI, BPA will bill and provide refunds under the Ownership Agreement to the party holding the Capacity Ownership Share at the time of the billing or refund, and such party shall be responsible for payment. This includes Schedule C invoices even if the billed project had been completed prior to the effective

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date of the assignment or assignment termination. Snohomish acknowledges that, for purposes of the Ownership Agreement, upon termination of the assignment, Snohomish shall be responsible for the Capacity Ownership Share of costs included in Operating Plans that occurred during the assignment to IRI, but are billed after the termination of the assignment. Similarly, Snohomish shall be responsible for all monthly charges and true-ups even if the expense was incurred during the term of the assignment.

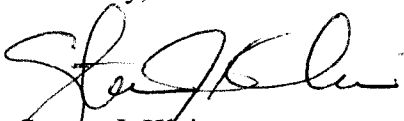
Snohomish hereby reserves all rights under Section 5 of the Agreement to acquire a portion of any Upgrade and does not assign any of such rights to IRI. Snohomish further reserves the right to request that BPA approve under Section 6 of the Ownership Agreement an assignment to IRI of that portion of any Upgrade to which it may be entitled under the Ownership Agreement.

Snohomish and IRI executed both an Assignment Agreement and Services Agreement on February 3, 2009, and one of the conditions precedent, that the Hay Canyon Project be declared commercially operational, has occurred (effective March 1, 2009). Accordingly, except for BPA's approval under Section 6 of the Ownership Agreement, all contractual conditions precedent to the assignment of Snohomish's Capacity Ownership Share to IRI have now been fulfilled. We therefore request BPA approve the assignment to IRI effective April 1, 2009.

The Assignment Agreement provides that the assignment to IRI is to continue for a period of fifteen years after the assignment becomes effective, unless earlier terminated by Snohomish and/or IRI in accordance with the Assignment Agreement. The Assignment Agreement between Snohomish and IRI contains provisions to notify BPA if the assignment terminates for any reason, with no less than 30 days advance notice. Snohomish agrees that, by granting approval of this assignment, BPA is not granting approval for any future assignments by either IRI or Snohomish.

Based on the conditions described above, Snohomish respectfully requests BPA's approval of this assignment effective April 1, 2009. Please let me know if you have any questions or need more information.

Sincerely,



Steven J. Klein  
General Manager

cc: Anna Miles, Senior Manager Power Supply  
Jon Fischer, Director, Transmission Origination, Iberdrola Renewables, Inc.



*Your Northwest renewables utility invites you to be a Conservation Sensation.*

March 23, 2009

Bonneville Power Administration  
Attention: Toni Timberman, Senior Account Executive  
P.O. Box 61409  
Vancouver, WA 98666-1409

Re: *Pacific Northwest AC Intertie Capacity Ownership Agreement, BPA  
Contract No. DE-MS79-94BP94525, as amended*

Dear Ms. Timberman:

Pursuant to Section 6(a) of the Pacific Northwest AC Intertie Capacity Ownership Agreement ("Ownership Agreement") between the U.S. Department of Energy acting by and through the Bonneville Power Administration ("BPA") and Public Utility District No. 1 of Snohomish County, Washington ("Snohomish"), I hereby respectfully request approval by BPA of the assignment of Snohomish's Capacity Ownership Share to Iberdrola Renewables, Inc. ("IRI"), including but not limited to the right to:

- (i) Wheel power on behalf of third parties under Section 3(b)(2) of the Ownership Agreement; and
- (ii) Schedule power on the PNW AC Intertie under Section 4 of that Agreement.

The assignment is being made under the Agreement Assigning Pacific Northwest AC Transmission Service Rights Under the Pacific Northwest AC Intertie Capacity Ownership Agreement ("Assignment Agreement"), executed on February 2, 2009, between Snohomish and IRI. IRI has agreed to act as Snohomish's agent and to participate in the Capacity Owner's Committee under the Pacific Northwest AC Intertie Capacity Ownership Services Agreement between IRI and Snohomish, also executed on February 2, 2009. All capitalized terms used herein have the meaning defined in the Ownership Agreement unless otherwise noted.

Snohomish understands that, in light of the temporary nature of the assignment of its Capacity Ownership Share to IRI, BPA will bill and provide refunds under the Ownership Agreement to the party holding the Capacity Ownership Share at the time of the billing or refund, and such party shall be responsible for payment. This includes Schedule C invoices even if the billed project had been completed prior to the effective date of the assignment or assignment termination. Snohomish acknowledges that, for purposes of the Ownership Agreement, upon termination of the assignment, Snohomish

March 23, 2009

Page 2 of 2

shall be responsible for the Capacity Ownership Share of costs included in Operating Plans that occurred during the assignment to IRI, but are billed after the termination of the assignment. Similarly, Snohomish shall be responsible for all monthly charges and true-ups even if the expense was incurred during the term of the assignment.

Snohomish hereby reserves all rights under Section 5 of the Agreement to acquire a portion of any Upgrade and does not assign any of such rights to IRI. Snohomish further reserves the right to request that BPA approve under Section 6 of the Ownership Agreement an assignment to IRI of that portion of any Upgrade to which it may be entitled under the Ownership Agreement.

Snohomish and IRI executed both an Assignment Agreement and Services Agreement on February 3, 2009, and one of the conditions precedent, that the Hay Canyon Project be declared commercially operational, has occurred (effective March 1, 2009). Accordingly, except for BPA's approval under Section 6 of the Ownership Agreement, all contractual conditions precedent to the assignment of Snohomish's Capacity Ownership Share to IRI have now been fulfilled. We therefore request BPA approve the assignment to IRI effective April 1, 2009.

The Assignment Agreement provides that the assignment to IRI is to continue for a period of fifteen years after the assignment becomes effective, unless earlier terminated by Snohomish and/or IRI in accordance with the Assignment Agreement. The Assignment Agreement between Snohomish and IRI contains provisions to notify BPA if the assignment terminates for any reason, with no less than 30 days advance notice. Snohomish agrees that, by granting approval of this assignment, BPA is not granting approval for any future assignments by either IRI or Snohomish.

Based on the conditions described above, Snohomish respectfully requests BPA's approval of this assignment effective April 1, 2009. Please let me know if you have any questions or need more information.

Sincerely,



Steven J. Klein  
General Manager

cc: Anna Miles, Senior Manager Power Supply  
Jon Fischer, Director, Transmission Origination, Iberdrola Renewables, Inc.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 31, 2009

In reply refer to: TSE/TPP-2

Mr. Steven J. Klein, General Manager  
Snohomish County PUD No. 1  
P.O. Box 1107  
Everett, WA 98206

Dear Mr. Klein:

The Bonneville Power Administration (BPA) has received the March 23, 2009 letter from Public Utility District No. 1 of Snohomish County, Washington (Snohomish) notifying BPA of the assignment of Snohomish's Capacity Ownership Share to Iberdrola Renewables, Inc. (IRI), effective April 1, 2009 for a term of 15 years. In the letter, Snohomish requested BPA's approval of this assignment pursuant to section 6(a) of the Pacific Northwest AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94525 (Ownership Agreement). BPA hereby approves of this assignment as described in the March 23, 2009 letter.

During the term of the assignment BPA will consider IRI to be the responsible party for all matters associated with the Ownership Agreement other than (i) the right under Section 5 to acquire a portion of any Upgrade and (ii) the rights to participate on the Capacity Owners' Committee under Sections 12 through 16 for which IRI will act as Snohomish's agent. BPA also acknowledges Snohomish's retention of its right under Section 6 to request that BPA approve an assignment to IRI of any Snohomish's portion of an Upgrade;

BPA understands that the assignment agreement between Snohomish and IRI provides for a minimum of 30 days advance notice to BPA prior to termination. If possible, please provide 30 to 60 days additional advance notice so that BPA has sufficient time to make the necessary changes to our scheduling systems.

Please do not hesitate to contact me at (360) 619-6015 if you have any questions regarding this information.

Sincerely,

A handwritten signature in black ink that reads "Toni L. Timberman".

Toni L. Timberman  
Senior Transmission Account Executive  
Transmission Sales

cc:

Ms. Anna Miles, Snohomish County PUD No. 1  
Mr. Jon Fischer, Iberdrola Renewables, Inc.

APR 01 2009

bcc:

D. Fitzsimmons – DKN-WASH

Z. Palmer – FR-2

H. Browning-Craig – KSC-4

C. Olsen – KSC/TPP-1

S. Cooksey – KSSB-6

P. Nguyen – KSSB-6

T. Phillips – KSSB-6

C. Ealy – KSSB-MODD

S. Larson – PS-6

E. Elizeh – TSE/TPP-2

S. Holden-Baker – TSS/DITT-1

P. Howard – TSES/TPP-2

D. Vanderzanden – TSES/TPP-2

C. Surface – TSSP/DITT-1

M. Willey – TSSP/DITT-1

Customer File – TSE/TPP-2 (TM-11, Iberdrola Renewables, Inc.)

Customer File – TSE/TPP-2 (TM-11, Snohomish County PUD No. 1)

Offical File – KSC/TPP-1



February 22, 2016

Effective February 18, 2016, Iberdrola Renewables, LLC has changed its name to Avangrid Renewables, LLC. This change more closely aligns Avangrid Renewables with its newly-formed and publicly-traded US holding company, AVANGRID, Inc. (AGR), a diversified energy and utility company with \$30 billion in assets and operations in 25 states, and is the first phase of a broader re-branding initiative by the company. Day-to-day operations and business contacts will not change. You will continue to do business with the same dependable team as always.

Avangrid Renewables operates 6.3 gigawatts of generation capacity, including 5.6 gigawatts of wind power at 53 windfarms across 18 states, making it the second largest wind energy producer in the U.S. Avangrid Renewables is the U.S. renewable energy division of parent company Iberdrola, S.A., an energy pioneer with the largest renewable asset base of any company in the world – more than 14,000 megawatts of energy spread across a dozen countries.

AVANGRID, Inc. (formerly known as Iberdrola USA, Inc.) will continue to provide credit support on behalf of Avangrid Renewables, LLC. AVANGRID, Inc. is rated Baa1 with a stable outlook by Moody's Investors Service and BBB with a positive outlook by Standard & Poor's.

Also effective on February 18, 2016, Avangrid Renewables' affiliate Iberdrola Energy Services, LLC has changed its name to ENSTOR Energy Services, LLC. ENSTOR Energy Services is also a subsidiary of AVANGRID, Inc.

Please find attached Avangrid Renewables' name change documentation and a simplified organizational chart. Also, please note that our contact information, including email addresses, has not changed.

We at Avangrid Renewables look forward to continuing our business relationship with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Burkhartsmeier", with a long horizontal flourish extending to the right.

Frank Burkhartsmeier  
CEO



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 30, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Section 11(b)(1) of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94525 (Capacity Ownership Agreement), between the Bonneville Power Administration (BPA) and Avangrid Renewables, LLC (Avangrid) requires Avangrid to participate in the Remedial Action Scheme (RAS) necessary to maintain Avangrid's share of intertie capacity.

The RAS includes generator dropping to support north to south schedules on the AC Intertie. Avangrid has historically purchased generator dropping service from BPA, to fulfill that portion of its RAS obligation under the Capacity Ownership Agreement.

BPA will continue to provide generator dropping service until such time as Avangrid arranges to self-provide generator dropping to meet its obligations. If Avangrid elects to provide its own generator dropping, Avangrid must provide BPA with at least two years notice to allow time for necessary system adjustments. Consistent with Section 11(b)(1) of the Capacity Ownership Agreement, Avangrid would also need to demonstrate to BPA that it has the ability to self-provide generator dropping.

BPA has updated its charge for generator dropping service to account for two separate changes affecting its cost of providing the service: the 2016 upgrade of the DC Intertie and BPA's updated generator dropping rate set in the BP-18 Rate Case. The upgrade to the DC Intertie reduced the amount of generator dropping required because the DC Intertie rating went from 3,100 MW to 3,220 MW. The BP-18 Rate Case increased the cost of providing generator dropping service to reflect: 1) the increase in O&M costs; 2) Grand Coulee 3rd power house outages; and 3) an increase in the Handy Whitman cost index.

The charge for generator dropping service has thus fluctuated as follows:

- October 1, 2015 – February 28, 2018: \$6.90 per MW/month (Previous Charge)
- December 20, 2016 – September 30, 2017: \$6.79 per MW/month (Interim Charge)
- October 1, 2017 – present: \$9.64 per MW/month (New Charge)



This new charge of \$9.64 per MW/month will be reflected in Avangrid’s monthly transmission bills starting March 1, 2018. Avangrid’s March transmission bill will also reflect a true-up from December 2016 through February 2018 to reflect the changes in the charge for generator dropping. This true-up is summarized in the table below:

<b>Refund using Interim Charge minus Previous Charge (from period of December 20, 2016 to September 30, 2017)</b>	<b>Charge using New Charge minus Previous Charge (from period of October 1, 2017 to February 28, 2018)</b>	<b>One time amount to be billed using New Charge on Avangrid’s March 2018 transmission bill</b>
$[\$6.79 - \$6.90] \times 9 \text{ months and } 11 \text{ days} \times 42 \text{ MW} = - \$43$	$[\$9.64 - \$6.90] \times 5 \text{ months} \times 42 \text{ MW} = \$575$	$-\$43 + \$575 = \$532$

If you have any questions regarding this information, please contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.03.30  
12:16:03 -07'00'

Transmission Account Executive  
Transmission Sales

- cc:
- Ms. Jan Korver, Avangrid Renewables, LLC
  - Ms. Anna Berg, Public Utility District No. 1 of Snohomish County
  - Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County
  - Ms. Kim Gilliland, Bonneville Power Administration



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

January 28, 2019

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Enclosed please find proposed amendments to the FY 2015 through FY 2020 Operating Plans. Sections 9(b)(2)(B)(iii) and 13(k) of the PNW AC Intertie Capacity Ownership Agreement (COA) allow operating plans to be amended to add replacement costs, or to increase forecasted costs. For the following Work Orders, Actual or Updated Costs exceed the Forecasted Costs by at least five percent. These Work Orders were included in prior operating plans, so the proposed Amendments to the Operating Plans below reflect the additional costs.

**Table 1**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plans to be Amended</b>	<b>Forecasted Costs</b>	<b>Actual or Updated Costs<sup>1</sup></b>
00297236	Ashe-Marion No. 2 - Replace Spacer-Dampers (225.3 miles)	2016, 2018, 2019, 2020	\$4,404,125	\$4,750,000
TBD Dixonville 04	Dixonville Substation - Replace Series Capacitor Controls (PAC Project)	2015, 2016, 2017, 2018, 2019, 2020	\$600,000	\$972,000
TBD Grizzly 02	Grizzly Substation - Replace SCADA/Sequential Event Recorder (BPA Project)	2018, 2020	\$1 <sup>2</sup>	\$290,000
TBD Malin 18	Replace Sequential Event Recorder	2018, 2020	\$1 <sup>2</sup>	\$1,300,000

<sup>1</sup> The costs listed under the “Actual or Updated Costs” column are Direct Costs (without Indirect Costs or AFUDC costs). Please note that for work orders with the interim designation of “TBD”, the actual costs are not available at this time so the information listed in Table 1 is an updated cost (rounded).

<sup>2</sup> For the \$1 listed under the column “Forecasted Costs”, this was a placeholder representing that there will be a future cost. As of the date of this letter, we are providing updated information on the costs.

The following Work Orders are proposed to be *added* to the Operating Plans listed below.

**Table 2**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs as of the Date of this Letter</b>	<b>Work Order Approved &amp; Work Order Closed Dates</b>
00374787	Malin Substation - Replace Round Mountain Relays	2015, 2016, 2017, 2018	\$933,000	11/30/2014 & 1/17/2018
00439779	Ashe-Marion No. 2 - Emergency Replacement of Conductor	2017, 2018, 2019	\$4,300,000	3/7/2017 & 2/22/2018
00440381	Slatt Substation - Emergency Replacement of Breaker	2018, 2019	\$1,100,000	3/24/2017 & 11/27/2017

If you would like to recommend a revision to any forecasted cost or dispute the addition of a project, please do so through the Capacity Owner Committee (Committee). Sections 13(d), 13(e) and 13(m) of the COA detail the process and requirements. If we receive no recommendation from the Committee by February 25, 2019, the addition of these projects, as well as increased costs, will be considered accepted on February 25, 2019 according to the contract terms (See Sections 13(e) and 13(m)).

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2019.01.28  
14:47:50 -08'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Ms. Jan Korver, Avangrid Renewables, LLC  
Ms. Anna Berg, Public Utility District No. 1 of Snohomish County  
Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County  
Ms. Kim Gilliland, Bonneville Power Administration

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679				
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340				
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764				
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4						
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

February 12, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Listed in Table 1 below are the Schedule C Replacement Projects energized from April 2016 to April 2017. Table 1 summarizes the work order numbers, project information, and Avangrid Renewables, LLC's (Avangrid) pro rata shares of the project costs under Contract No. DE-MS79-94BP94525, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date<sup>1</sup></b>	<b>Avangrid Cost Share</b>
00339633	Chief Joseph Substation – Security Enhancements	7/7/2018	\$2,798
00356246	Grizzly Substation – Replace Analog Transfer Trip Equipment	7/21/2018	\$87
00356248	Sand Spring Compensation Station – Replace Analog Transfer Trip Equipment	8/5/2018	\$1,795
00401519	John Day Substation – Station Service Cable Replacement	2/7/2018	\$359
00404279	Fort Rock Compensation Station – Emergency Replacement of Transfer Switch Bank No. 1	7/10/2018	\$1,549

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for work order No. 00401519, it means that the work order was closed, but that the work order and Operating Plan were later amended. Work order No. 00401519 was amended to add the John Day Substation project cost pursuant to section 13(k) of the COA.

The charges for these projects will be included in Avangrid's February transmission bill to be sent in March 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00358697	Malin Substation – Replace Analog Transfer Trip Equipment	2018	Work Order Cancelled
00379615	Malin Substation – Malin Physical Security Enhancements	2016	Not applicable to COA
TBD Alvey 04	Alvey Substation – Replace Line Loss Logic Equipment for Marion Alvey Line	2016, 2018	Replaced by Work Order 00339242
TBD Alvey 05	Alvey Substation – Replace Equipment Related to Line Loss Logic/RAS	2016, 2018	Replaced by Work Order 00339242

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud bpa gov  
Date: 2018 02 12 15:55:42  
-08'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Jan Korver, Avangrid Renewables, LLC  
Ms. Anna Berg, Public Utility District No. 1 of Snohomish County  
Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County  
Ms. Kim Gilliland, Bonneville Power Administration

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> Percent (%) applied to PNWAC (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 1, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Enclosed for your records are two updated Exhibits: Exhibit F, Revision No. 1 and Exhibit G Revision No. 1 of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94525, between the Bonneville Power Administration and the Public Utility District of Snohomish County, under assignment to Avangrid Renewables, LLC.

A draft Exhibit F, Revision No. 1 and draft Exhibit G, Revision No. 1 were provided as part of the document packet at the October 26, 2017 3<sup>rd</sup> AC Capacity Owners Annual Meeting.

The primary changes identified under Exhibit F, Revision No. 1 are as follows:

1. Add footnotes to clarify information throughout Exhibit F;
2. Add the Shunt Reactor at Alvey Substation, add the breakers and disconnect switches at Slatt Substation, and update several sections in this Exhibit F to reflect equipment added to the Intertie facilities over the years;
3. Add two disconnect switches at Grizzly Substation (for John Day terminals) and two disconnect switches at Marion Substation (for Buckley and Alvey line terminal) that were all inadvertently omitted from the original Exhibit F;
4. Add interchange meter references to Alvey Substation and Captain Jack Substation, add a Relay House to Alvey Substation, and add a Control House to Grizzly Substation and Malin Substation respectively to clarify treatment for these facilities; and
5. Add the percentages for most of the station general facilities at various substations.

The change under Exhibit G, Revision No. 1 is to update the addition of PacifiCorp and that Turlock Irrigation District is the permanent assignee of Power Resources Cooperative and not Pacific Northwest Generating Cooperative.



If you have any questions regarding this information, please contact me by June 18, 2018 at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.06.01 15:14:55 -07'00'

Transmission Account Executive  
Transmission Sales

cc:

Ms. Jan Korver, Avangrid Renewables, LLC

Ms. Anna Berg, Public Utility District No. 1 of Snohomish County

Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County

Ms. Kim Gilliland, Bonneville Power Administration

2 Enclosures

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		

1. **Alvey 500 kV Switchyard**

Bank No. 5 Terminal

• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	100
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5035	100	100
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General <sup>7</sup>	60	100
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the		

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

July 24, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Pursuant to Section 13(k) and 9(b)(2)(A)(v) of the PNW AC Intertie Capacity Ownership Agreement (COA), Contract No. DE-MS79-94BP94525 between Public Utility District No. 1 of Snohomish County (Snohomish) reassigned to Avangrid Renewables, LLC (Avangrid) and the Bonneville Power Administration (BPA), I have enclosed for your review the amendment to the FY 2017 Operating Plan (Amendment).

The Amendment updates Schedules A, B, D, E, F, and G of the FY 2017 Operating Plan to reflect updated costs for FY 2017 and modifies the monthly charge related to those costs. Schedule ABFG is included to support Schedules A, B, F and G of the Operating Plan.

Each year's Operating Plan is used to forecast each Capacity Owner's allocation of qualifying expenses based on their ownership share. This monthly charge is included on each Capacity Owner's transmission bill. After the end of each fiscal year, the Operating Plan is amended to reflect actual, rather than forecasted costs. The pro-rata share of the difference between forecasted and actual costs is reflected as a one-time charge, or credit, on each Capacity Owner's transmission bill.

The actual costs are included in the "Actual" column of the Schedules A, B, D, E, F and G of the Amendment. The actual costs in Schedules D (General Plant), and E (Other-PacifiCorp) are *higher* than the forecast.

The other schedules show that actual costs in Schedules A (Operations), B (Maintenance), F (Contract and Rates), and G (Transmission Scheduling) are *lower* than the forecast.

Overall for FY 2017, actual costs for the BPA portion of the Third AC Intertie were *higher* than the forecasted costs communicated in the October 2, 2015 letter. The costs are higher by

\$570,480, as shown on the summary page of the Amendment. The actual costs are \$233 per MW-month, compared to the forecasted costs of \$219 per MW-month in the 2015 letter. The FY 2017 charge for Avangrid will be \$6,846 plus \$361 interest, calculated pursuant to Section 9(b)(2)(A)(vi) of the COA. Thus, Avangrid's total one time true-up charge will be \$7,207, in its July 2018 transmission bill to be sent in August 2018.

This letter also serves as notice of an amendment to add five Work Orders to the Schedule Cs of this FY 2017 Operating Plan. Note that one of the Work Orders listed below has been billed and the other was part of a cancellation notice.

<b>Work Order Number / FY 17 Operating Plan Page</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs Estimate as of the Date of this Letter</b>
00248443/ Page 6	Alvey Substation – Install a New Shunt Reactor	FY 2012, FY 2013, FY 2014, FY 2015, FY 2017	\$10,000,000
00329379/ Page 14	Marion-Alvey No. 1 – Access Road Improvements	FY 2017, FY 2018	\$729,000
00356246/ Page 28	Grizzly Substation – Replace Analog Transfer Trip Equipment	FY 2017, FY 2018	See Billing notice sent on February 12, 2018
00358697/ Page 29	Malin Substation – Analog Transfer Trip	FY 2017	See Cancellation notice sent on February 12, 2018

This letter also provides notice of amendment to the Schedule Cs of FY 2017 Operating Plan to increase the estimated cost related to the following Work Order:

1. Work Order 00339242 at Alvey Substation (Remedial Action Scheme) was originally forecasted for \$250k. Currently the estimated direct costs are nearly \$1.3M and preliminary notes state that the BPA cost share percentage will be 50%. Please refer to the WO Database Projections Report (June 12, 2018). The increased costs were originally provided in a report from PacifiCorp in April 2017. BPA's information from 2016, regarding the increase, is that the scope was broadened for changes in design, materials and construction.

In addition, we have updated the Schedule C, Table of Contents, to reflect current Work Order information, such as: cancelled Work Orders, Work Orders added to the FY 2017 Operating Plan, updates to Work Order completion dates, and Work Order descriptions.

Please review this information and respond through the Capacity Owners Committee (Committee) as provided in Sections 13(d), (e), and (m) of the COA. If the Committee recommends a revision(s) to any forecast cost, actual cost or General Plant Cost, in this

Amendment, BPA will respond as provided in Section 13 of the COA. Pursuant to Sections 13(e) and (m) of the COA, if BPA does not receive a recommendation from the Committee by August 20, 2018, the addition of these projects, together with the increased cost, will be considered accepted.

If you have any questions regarding this information, please contact me at (360) 619-6704.

Sincerely,

On behalf of J. Diego Ochoa  
Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Jan Korver, Avangrid Renewables, LLC  
Ms. Anna Berg, Public Utility District No. 1 of Snohomish County  
Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County  
Ms. Angela Declerk, Bonneville Power Administration



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

August 17, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Listed in Table 1 below are the Schedule C Replacement Projects energized from November 2014 to December 2017. Table 1 summarizes the work order numbers, project information, and Avangrid Renewables, LLC's (Avangrid) pro rata shares of the project costs under Contract No. DE-MS79-94BP94525, PNW AC Intertie Capacity Ownership Agreement (COA). The COA is between Public Utility District No. 1 of Snohomish County (Snohomish) reassigned to Avangrid and Bonneville Power Administration. The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date <sup>1</sup>	Avangrid Cost Share
00248443	Alvey Substation - Install a New Shunt Reactor	10/11/2018	\$162,054
00329379	Marion-Alvey No. 1 - Access Road Improvements	8/19/2018	\$3,428
00335841	Marion-Alvey No. 1 - Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	12/19/2018	\$19,292

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for Work Order No. 00348163, it means that the Work Order was closed, but that the Work Order and Operating Plan were later amended. Work Order No. 00348163 was amended to add the John Day Substation project cost pursuant to Section 13(k) of the COA.

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date</b>	<b>Avangrid Cost Share</b>
00339242	Alvey Substation - Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	10/13/2018	\$11,114
00348163	Grizzly-Captain Jack No. 1 - Land Rights Acquisition for Access Road, Structure 156/1	4/11/2018	\$1,176
00381350	Summer Lake Substation - Upgrade Engine Generator	1/6/2019	\$5,256
00396160	Dixonville Substation - 500 kV Relay Replacements to Meridian (PAC Project)	2/21/2019	\$6,828
00396161	Meridian Substation - 500 kV Relay Replacements to Dixonville (PAC Project)	2/21/2019	\$5,948

The charges for these projects will be included in Avangrid's August transmission bill to be sent in September 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00356249	Sycan Compensation Station - Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	2016, 2019	Not Applicable
00432972	Malin Substation - SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	2019	Work Order cancelled
00449853	Ashe-Marion No. 2 - Emergency Replacement of Access Road	2019	Work Order cancelled
TBD Malin 13	Malin Substation - Relay Replacement on the Round Mt. No 1 line	2015, 2017	Combined with TBD Malin 14 project
TBD Malin 14	Malin Substation - Relay Replacement on the Round Mt. No 2 line	2015, 2016, 2017	Combined into BPA Work Order #00374787

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
TBD Summerlake 03	Summerlake Substation - Work on BPA Relays on the Grizzly line	2015, 2017	Combined into BPA Work Order #00322042
TBD Sycan 01	Sycan Compensation Station - Replace Station Battery	2018	Combined into Work Order #00423702
TBD Sycan 02	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 03	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 04	Sycan Compensation Station - Update Grounding Equipment	2018	Combined into Work Order #00423702

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.08.17 14:35:50 -07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Ms. Jan Korver, Avangrid Renewables, LLC  
Ms. Anna Berg, Public Utility District No. 1 of Snohomish County  
Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County  
Ms. Angela DeClerck, Bonneville Power Administration

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-94BP94525 (the "COA"). The COA is between the Bonneville Power Administration and Public Utility District No. 1 of Snohomish County, reassigned to Avangrid Renewables, LLC.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month. The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

Please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa".

JUAN OCHOA  
2018.09.28  
14:39:02 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Ms. Jan Korver, Avangrid Renewables, LLC  
Ms. Anna Berg, Public Utility District No. 1 of Snohomish County  
Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County  
Ms. Angela DeClerck, Bonneville Power Administration



**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

**EXHIBIT I**

**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
 FY 2020  
 Operating Plan  
 EXHIBIT I  
 Schedule C Table of Contents**

Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
**FY 2020**  
**Operating Plan**  
**EXHIBIT I**  
**Schedule C Table of Contents**

*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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**Project Work Order:** 00335885  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 152/2  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** 00466505  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2021  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 12  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey 13  
**Project Short Description:** Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2022  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.6. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

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Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

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- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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**Project Work Order:** TBD Sand Springs 04  
**Project Short Description:** Replace Station Battery (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/30/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

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- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

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- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** TBD Summer Lake 05  
**Project Short Description:** Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.16. Summer Lake 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2024  
**Status:**  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$19,264,660				

**Notes:**

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- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018
<b>General Plant</b>						
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	53,294,126
<b>Total General Plant</b>						<b>1,297,309,592</b>

↑ To D-1

*[To Schedule D, Line 1]*

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 <b>TOTAL GENERAL PLANT</b>		<b>266,786</b>	<b>1,282,195</b>	<b>1,548,981</b>	<b>293,540</b>	<b>1,381,947</b>	<b>1,675,487</b>



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	1,271,675	113,150	1,384,825	105,012	1,489,837
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	(1,504,469)		(1,651,612)		(1,783,378)
	8,117,177		8,403,335		8,906,982

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
-------	----------------------	-------------

*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

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**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020**  
**Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 21, 2018

In reply refer to: TSE/TPP-2

Mr. Jon Fischer, Managing Director,  
Transmission Origination  
Avangrid Renewables, LLC  
1125 NW Couch, Suite 700  
Portland, OR 97209

Subject: Contract No. DE-MS79-94BP94525

Dear Mr. Fischer:

In accordance with the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-94BP94525, between Public Utility District No. 1 of Snohomish County, reassigned to Avangrid Renewables, LLC (Avangrid) and the Bonneville Power Administration, listed in Table 1 below is the Schedule C Replacement Project energized in June 2017. Table 1 summarizes the work order number, project information, and Avangrid's pro rata share of the project costs. The Schedule C referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	Avangrid Cost Share
00340156	Marion Substation – Transfer Trip Replacement	11/21/2018	\$2,517

The charge for this project will be included in Avangrid's November transmission bill to be sent in December 2018.

The Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00379612	Grizzly Substation – Physical Security Project	2017	General Plant
00381830	Malin Substation – Replacement of Communication Battery Charger	2017	General Plant
00381831	Fort Rock Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00381833	Sycan Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00384207	Buckley Substation – Replace Line Relay on Slatt Terminal	2019	Not Applicable
TBD Dixonville 05	Dixonville Substation – Regravel Yard	2018, 2019	Not Applicable

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.11.21  
11:59:38 -08'00'

Transmission Account Executive  
Transmission Sales

3 Enclosures

cc:

Ms. Jan Korver, Avangrid Renewables, LLC  
Ms. Anna Berg, Public Utility District No. 1 of Snohomish County  
Mr. Ian Hunter, Public Utility District No. 1 of Snohomish County  
Ms. Kimberly Gilliland, Bonneville Power Administration

Project Work Order: 00340156  
 Project Short Description: Transfer Trip Replacement  
 Project Facility: Marion Substation  
 Exhibit F Section: B.11. Marion 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 50%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 8/21/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b> (Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b> <b><u>Bank No. 5 Terminal</u></b>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100

<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General	100	100
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5035	100	100
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Station General <sup>7</sup>	60	100
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>

**12. Meridian 500 kV Yard (BPA/PacifiCorp)**

Note: All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.

For Dixonville Line Terminal

• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the		

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
Captain Jack Line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the addition of PacifiCorp effective January 1, 1995, and the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	<u>\$971,500</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	<u>\$0</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	<u>\$0</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	<u>\$971,500</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

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**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line			Less		
	No.	Forecast	Actual	General	Adjusted	Difference
				Plant	Actuals	
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,764	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

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**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

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**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

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**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

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**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

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**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to**  
**PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

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**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	<b>Total from Schedule C:</b>	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	<b>Schedule C Total After Proration:</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
9	<b>Customer Percentage Applied from Exhibit G</b>									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	<b>Exhibit G</b>									
19	<b>Customer</b>	<b>Percentage</b>								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	<b>Footnotes</b>									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both inertie and non-inertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									



**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

**Interest Calculation**  
**Avangrid Renewables, LLC**  
**9/30/2016-5/31/2018**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/30/2016	5/31/2018		609	\$6,846	\$361.44
9/30/2016	10/30/2016	3.064%	31		17.81
10/31/2016	11/29/2016	3.065%	30		17.25
11/30/2016	12/30/2016	3.079%	31		17.90
12/31/2016	1/30/2017	3.086%	31		17.94
1/31/2017	2/27/2017	3.091%	28		16.23
2/28/2017	3/30/2017	3.096%	31		18.00
3/31/2017	4/29/2017	3.108%	30		17.49
4/30/2017	5/30/2017	3.121%	31		18.15
5/31/2017	6/29/2017	3.130%	30		17.61
6/30/2017	7/30/2017	3.143%	31		18.28
7/31/2017	8/30/2017	3.159%	31		18.37
8/31/2017	9/29/2017	3.170%	30		17.83
9/30/2017	10/30/2017	3.208%	31		18.65
10/31/2017	11/29/2017	3.216%	30		18.10
11/30/2017	12/30/2017	3.225%	31		18.75
12/31/2017	1/30/2018	3.237%	31		18.82
1/31/2018	2/27/2018	3.239%	28		17.01
2/28/2018	3/30/2018	3.262%	31		18.97
3/31/2018	4/29/2018	3.281%	30		18.46
4/30/2018	5/31/2018	3.302%	32		19.82
			<b>609</b>		<b>361.44</b>

"This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release."

**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

\$9,655,061 / 3450 MW / 12 Months = \$233.21 /MW-month  
**Rounded to \$233 for whole-dollar billing**

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

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Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>Operating Revenues</b>						
<b>Sales</b>						
<b>Network</b>						
1    Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617	\$ 133,535	102%
2    Other Network	436,310	461,684	451,685	442,038	446,492	101%
3    Intertie	73,891	78,630	76,368	76,949	76,257	99%
4    Other Direct Sales	263,312	270,592	263,557	265,520	265,824	100%
5 <b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262	41,491	96%
6 <b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945	128,126	105%
7 <b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>	<b>1,091,725</b>	<b>101%</b>
<b>Operating Expenses</b>						
<b>Transmission Operations</b>						
<b>System Operations</b>						
8    INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701	9,903	93%
9    POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945	13,722	98%
10   CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009	23,567	94%
11   TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979	8,029	80%
12   STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118	2,028	96%
13   SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081	23,444	97%
14 <b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>	<b>80,693</b>	<b>94%</b>
<b>Scheduling</b>						
15   RESERVATIONS	1,167	1,383	1,227	1,044	1,211	116%
16   PRE-SCHEDULING	382	276	284	284	211	74%
17   REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929	5,062	103%
18   SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182	3,656	87%
19   SCHEDULING AFTER-THE-FACT	273	289	277	277	305	110%
20 <b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>	<b>10,445</b>	<b>97%</b>
<b>Marketing and Business Support</b>						
21   TRANSMISSION SALES	2,299	2,775	2,834	2,621	2,524	96%
22   MKTG TRANSMISSION FINANCE	-	-	-	-	-	0%
23   MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660	4,465	96%
24   MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116	2,093	99%
25   MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651	7,948	119%
26 <b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>	<b>17,030</b>	<b>106%</b>
27   EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753	16,908	95%
28   LEGAL SUPPORT	2,611	3,548	1,641	1,962	2,304	117%
29   TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522	9,847	73%
30   AIRCRAFT SERVICES	1,094	2,230	2,489	1,839	882	48%
31   LOGISTICS SERVICES	6,685	4,488	4,354	5,151	5,861	114%
32   SECURITY ENHANCEMENTS	889	716	561	561	547	98%
33 <b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>	<b>36,350</b>	<b>89%</b>
34 <b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>	<b>\$ 144,518</b>	<b>94%</b>

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling

Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

<p>TLM ROW VEG                  \$ 54,759,896                  SUB Maint                  \$ 30,860,406</p>	<p>50.84% \$ 59,480,947.02</p>	<p>16.22% \$ 18,970,654.33</p>	<p>8562030295.78% \$ 121,417,590.42 Total Allocation incl. Contr. &amp; Rates.                  8562030292.00% \$ 116,994,457.86 Total Allocations</p>
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<p>\$ 36,509,900.95 SPC+PSC                  \$ 11,570,907.11 Mtc. Indirects                  \$ 155,357,995.65 Dir Mtc less Indirects</p>
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Report ID: 0061FY17 Run Date/Time: November 07, 2017 06:37  
 Requesting BL: TRANSMISSION BUSINESS UNIT Data Source: EPM Data Warehouse  
 Unit of Measure: \$ Thousands % of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

- <1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.
- <2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.
- <3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.
- <4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
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**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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**Capacity Ownership Agreement**  
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This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

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Exhibit I Page 5  
Prepared Date: 7/24/2018

Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

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Exhibit I Page 6  
Prepared Date: 7/24/2018

*Below is information about work orders added or removed, acronyms and further information.*

Work Order Number(s) ADDED	Date of Correspondence	Page Number
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

Work Order Number(s) REMOVED or to be REMOVED	Correspondence Notes	Page Number
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
FY2017 OPERATING PLAN**

Exhibit I - Page 47  
Prepared Date 7/24/2018

**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,266,580</u></u></b>	<b><u><u>\$2,485,604</u></u></b>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 48  
 Prepared Date 7/24/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
<b>Total General Plant</b>	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>

<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			<b>1,260,992,898</b>

↑ To D-1  
↓

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 52  
 Prepared Date 7/24/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 <b>TOTAL GENERAL PLANT</b>		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

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## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$397,813.51</u></b>	<b><u>\$381,573.21</u></b>	<b><u>(\$16,240.30)</u></b>

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## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

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**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.



**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	_____	_____
MFUs of the FCRTS	2	3,574	_____	_____
Allocation Factor (Line 1/Line 2)	3	2.27%	_____	_____
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727	_____	_____
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727	_____	_____
Operations functionalization factor (Line 4/Line 5)	6	100.00%	_____	_____
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495	_____	_____
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 5  
Prepared Date: 9/28/18

**Operating Plan**

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**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

**Capacity Ownership Agreement  
 FY 2020  
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Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
**FY 2020**  
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*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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**Project Work Order:** 00335885  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 152/2  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00466505  
 Project Short Description: Ground Wire Replacement  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey 12  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2019  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**Project Work Order:** TBD Alvey Dixonville 01  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Alvey-Dixonville  
**Exhibit F Section:** A.1. Alvey-Dixonville 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

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Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.6. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

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Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>						<b>1,297,309,592</b>	

↑ To D-1

*[To Schedule D, Line 1]*

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

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 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018	FERC ACCOUNT					2019	FERC ACCOUNT					2020
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
<b>Total Plant-in-Service</b>	<b>104,094</b>	<b>33,256</b>	<b>28,592</b>	<b>66,852</b>	<b>232,795</b>	<b>133,489</b>	<b>33,256</b>	<b>30,131</b>	<b>69,909</b>	<b>266,786</b>	<b>156,057</b>	<b>33,256</b>	<b>31,298</b>	<b>72,929</b>	<b>293,540</b>			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019	FERC ACCOUNT					2020
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
<b>Total Additions</b>	<b>29,396</b>	<b>0</b>	<b>1,539</b>	<b>3,057</b>	<b>33,992</b>	<b>22,568</b>	<b>0</b>	<b>1,166</b>	<b>3,020</b>	<b>26,754</b>		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

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 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	1,271,675	113,150	1,384,825	105,012	1,489,837
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	(1,504,469)		(1,651,612)		(1,783,378)
	8,117,177		8,403,335		8,906,982

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>
B. Other PNW AC Intertie costs	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
C. Total Other Costs	3	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>

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**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$351,026</b></u>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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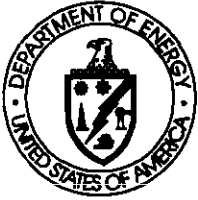
**FY 2020  
Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.





**Department of Energy**  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

Amendatory Agreement No. 1  
Contract No. DE-MS79-95BP94628

Mr. Jerry Miller, Director  
Power System Services  
PacifiCorp Electric Operations  
825 NE. Multnomah Street, Suite 625  
Portland, OR 97232

Dear Mr. Miller:

This letter constitutes an agreement between the United States of America, Department of Energy, acting by and through the Bonneville Power Administration (Bonneville) and PacifiCorp Electric Operations (PacifiCorp), a corporation organized and existing under the laws of the State of Oregon, to amend Contract No. DE-MS79-95BP94628 (Capacity Ownership Agreement). This letter agreement shall be effective upon the Effective Date of the Capacity Ownership Agreement and shall have the same term as the Capacity Ownership Agreement.

Bonneville and PacifiCorp agree that subparagraphs 3(b)(2)(A) and 3(b)(2)(B) in the Capacity Ownership Agreement shall be deleted and the following language shall be substituted:

- (A) PacifiCorp may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by PacifiCorp. PacifiCorp agrees to provide Bonneville access to its available unused Scheduling Share on any hour under terms and conditions comparable to those provided by Bonneville to PacifiCorp under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto.
- (B) PacifiCorp hereby waives any rights it may have under Exhibit B of the Long-Term Intertie Access Policy as Exhibit B existed on June 30, 1994, and any rights to access under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto. PacifiCorp does not waive any other rights it may have to transmission access on Bonneville's PNW-PSW Intertie including but not limited to: (1) firm transmission service on Bonneville's PNW-PSW Intertie; (2) transmission service under the open market provisions of section 5(c)(2) of

Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto; or (3) any rights to request an order from the Federal Energy Regulatory Commission under Section 211, or any other applicable section, of the Federal Power Act or any successor statute, requiring Bonneville to provide transmission service to PacifiCorp consistent with the above.

PacifiCorp and Bonneville agree to negotiate in good faith the terms and conditions under which PacifiCorp shall be able to access Bonneville's PNW-PSW Intertie under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy as it existed on June 30, 1994.

In order for Bonneville to implement the changes to (A) and (B) reflected above, a new paragraph 3(b)(2)(D) needs to be added to the Capacity Ownership Agreement. The language follows:

- (D) Bonneville shall not be obligated to provide wheeling under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto, until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to PacifiCorp or until December 27, 1994, which ever occurs sooner.

Further, the following amendments to subsection 4(a) are made. Delete the phrase "(and only PacifiCorp)" in the first sentence. Before the first sentence, insert the following three sentences: "For purposes of this section 4, all references to PacifiCorp shall mean PacifiCorp or its designee. Any such designee shall be identified in writing by PacifiCorp to Bonneville. Only one entity may submit schedules on PacifiCorp's behalf at any one time."

In addition, the following amendment to Exhibit E, paragraph B, is made. Delete the phrase "subparagraph 3(b)(1)(C)" and replace it with the phrase "subparagraph 3(b)(1)(C) or 3(b)(2)(B)."

If the foregoing terms are acceptable to PacifiCorp, please sign both copies and return one copy of this letter agreement. The remaining copy is for your files.

Sincerely,



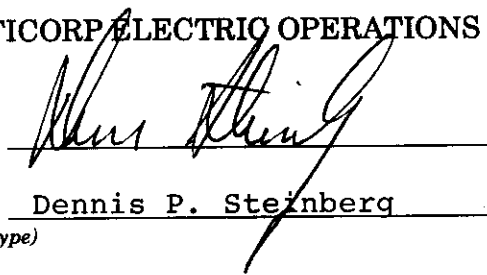
Senior Account Executive

Name Patrick G. McRae  
(Print/Type)

ACCEPTED:

PACIFICORP ELECTRIC OPERATIONS

By

  
Name Dennis P. Steinberg  
(Print/Type)

Title Senior Vice President

Date December 27, 1994

(PMLAN-MPSM-W:\MPSM\CT\LFRAGT\94628AA1.DOC)



**Department of Energy**  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

JAN 11 1995

Amendatory Agreement No. 2  
Contract No. DE-MS79-95BP94628

Mr. Jerry Miller, Manager  
Power System Services  
PacifiCorp  
825 NE. Multnomah Street, Suite 625  
Portland, OR 97232

Dear Mr. Miller:

This letter constitutes an agreement between the United States of America, Department of Energy, acting by and through the Bonneville Power Administration (Bonneville) and PacifiCorp, a corporation organized and existing under the laws of the State of Oregon, to amend Contract No. DE-MS79-95BP94628 (Capacity Ownership Agreement).

Bonneville and PacifiCorp agree that the first sentence of section 2(a) shall be stricken and replaced with the following sentence:

"This Agreement shall become effective January 1, 1995, unless otherwise determined by FERC."

Should the Federal Energy Regulation Committee determine the Effective Date of the Capacity Ownership Agreements to be after January 1, 1995, PacifiCorp agrees to pay Bonneville Southern Intertie firm wheeling charges for PacifiCorp's use of its Capacity Ownership Share between January 1, 1995, and the Effective Date as established by FERC.

If the foregoing terms are acceptable to PacifiCorp, please sign both copies and return one copy of this amendment. The remaining copy is for your files.

Sincerely,

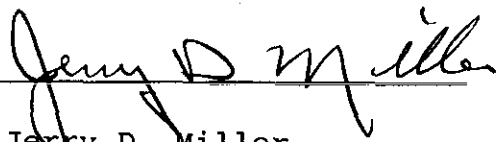


Senior Account Executive

Name Patrick G. McRae  
*(Print/Type)*

ACCEPTED:

PACIFICORP

By   
Name Jerry D. Miller  
*(Print/Type)*  
Title Manager, Power System  
Services  
Date January 23, 1995



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

March 30, 2018

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Section 11(b)(1) of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-95BP94628 (Capacity Ownership Agreement), between the Bonneville Power Administration (BPA) and PacifiCorp requires PacifiCorp to participate in the Remedial Action Scheme (RAS) necessary to maintain PacifiCorp's share of intertie capacity.

The RAS includes generator dropping to support north to south schedules on the AC Intertie. PacifiCorp has historically purchased generator dropping RAS service from BPA to fulfill that portion of its obligation under the Capacity Ownership Agreement.

BPA will continue to provide generator dropping service until such time as PacifiCorp arranges to self-provide generator dropping to meet its obligations. If PacifiCorp elects to provide its own generator dropping, PacifiCorp must provide BPA with at least two years notice to allow time for necessary system adjustments. Consistent with Section 11(b)(1) of the Capacity Ownership Agreement, PacifiCorp would also need to demonstrate to BPA that it has the ability to self-provide generator dropping.

BPA has updated its charge for generator dropping service to account for two separate changes affecting its cost of providing the service: the 2016 upgrade of the DC Intertie and BPA's updated generator dropping rate set in the BP-18 Rate Case. The upgrade to the DC Intertie reduced the amount of generator dropping required because the DC Intertie rating went from 3,100 MW to 3,220 MW. The BP-18 Rate Case increased the cost of providing generator dropping service to reflect: 1) the increase in O&M costs; 2) Grand Coulee 3rd power house outages; and 3) an increase in the Handy Whitman cost index.

The charge for generator dropping service has thus fluctuated as follows:

- October 1, 2015 – February 28, 2018: \$6.90 per MW/month (Previous Charge)
- December 20, 2016 – September 30, 2017: \$6.79 per MW/month (Interim Charge)
- October 1, 2017 – present: \$9.64 per MW/month (New Charge)

The new charge of \$9.64 per MW/month will be reflected in PacifiCorp's monthly transmission bills starting March 1, 2018. PacifiCorp's March transmission bill will also reflect a true-up from December 2016 through February 2018 to reflect the changes in the charge for generator dropping. This true-up is summarized in the table below:

<b>Refund using Interim Charge minus Previous Charge (from period of December 20, 2016 to September 30, 2017)</b>	<b>Charge using New Charge minus Previous Charge (from period of October 1, 2017 to February 28, 2018)</b>	<b>One time amount to be billed using New Charge on PacifiCorp's March 2018 transmission bill</b>
[\$6.79 - \$6.90] x 9 months and 11 days x 32 MW = - \$33	[\$9.64 - \$6.90] x 5 months x 32 MW = \$438	- \$33 + \$438 = \$405

If you have any questions regarding this information, please contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.03.30  
12:16:32 -07'00'

Transmission Account Executive  
Transmission Sales

cc:

Mr. Eric Carter, Bonneville Power Administration



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

January 28, 2019

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Enclosed please find proposed amendments to the FY 2015 through FY 2020 Operating Plans. Sections 9(b)(2)(B)(iii) and 13(k) of the PNW AC Intertie Capacity Ownership Agreement (COA) allow operating plans to be amended to add replacement costs, or to increase forecasted costs. For the following Work Orders, Actual or Updated Costs exceed the Forecasted Costs by at least five percent. These Work Orders were included in prior operating plans, so the proposed Amendments to the Operating Plans below reflect the additional costs.

**Table 1**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plans to be Amended</b>	<b>Forecasted Costs</b>	<b>Actual or Updated Costs<sup>1</sup></b>
00297236	Ashe-Marion No. 2 - Replace Spacer-Dampers (225.3 miles)	2016, 2018, 2019, 2020	\$4,404,125	\$4,750,000
TBD Dixonville 04	Dixonville Substation - Replace Series Capacitor Controls (PAC Project)	2015, 2016, 2017, 2018, 2019, 2020	\$600,000	\$972,000
TBD Grizzly 02	Grizzly Substation - Replace SCADA/Sequential Event Recorder (BPA Project)	2018, 2020	\$1 <sup>2</sup>	\$290,000
TBD Malin 18	Replace Sequential Event Recorder	2018, 2020	\$1 <sup>2</sup>	\$1,300,000

<sup>1</sup> The costs listed under the “Actual or Updated Costs” column are Direct Costs (without Indirect Costs or AFUDC costs). Please note that for work orders with the interim designation of “TBD”, the actual costs are not available at this time so the information listed in Table 1 is an updated cost (rounded).

<sup>2</sup> For the \$1 listed under the column “Forecasted Costs”, this was a placeholder representing that there will be a future cost. As of the date of this letter, we are providing updated information on the costs.



The following Work Orders are proposed to be *added* to the Operating Plans listed below.

**Table 2**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>FY Operating Plan(s) Proposed</b>	<b>Work Order Direct Costs as of the Date of this Letter</b>	<b>Work Order Approved &amp; Work Order Closed Dates</b>
00374787	Malin Substation - Replace Round Mountain Relays	2015, 2016, 2017, 2018	\$933,000	11/30/2014 & 1/17/2018
00439779	Ashe-Marion No. 2 - Emergency Replacement of Conductor	2017, 2018, 2019	\$4,300,000	3/7/2017 & 2/22/2018
00440381	Slatt Substation - Emergency Replacement of Breaker	2018, 2019	\$1,100,000	3/24/2017 & 11/27/2017

If you would like to recommend a revision to any forecasted cost or dispute the addition of a project, please do so through the Capacity Owner Committee (Committee). Sections 13(d), 13(e) and 13(m) of the COA detail the process and requirements. If we receive no recommendation from the Committee by February 25, 2019, the addition of these projects, as well as increased costs, will be considered accepted on February 25, 2019 according to the contract terms (See Sections 13(e) and 13(m)).

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2019.01.28  
14:51:36 -08'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:  
Mr. Eric Carter, Bonneville Power Administration

**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764	_____	_____	_____	_____
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.





## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

February 12, 2018

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Listed in Table 1 below are the Schedule C Replacement Projects energized from April 2016 to April 2017. Table 1 summarizes the work order numbers, project information, and PacifiCorp's pro rata shares of the project costs under Contract No. DE-MS79-95BP94628, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date <sup>1</sup></b>	<b>PacifiCorp's Cost Share</b>
00339633	Chief Joseph Substation – Security Enhancements	7/7/2018	\$2,098
00356246	Grizzly Substation – Replace Analog Transfer Trip Equipment	7/21/2018	\$65
00356248	Sand Spring Compensation Station – Replace Analog Transfer Trip Equipment	8/5/2018	\$1,346
00401519	John Day Substation – Station Service Cable Replacement	2/7/2018	\$269
00404279	Fort Rock Compensation Station – Emergency Replacement of Transfer Switch Bank No. 1	7/10/2018	\$1,162

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for work order No. 00401519, it means that the work order was closed, but that the work order and Operating Plan were later amended. Work order No. 00401519 was amended to add the John Day Substation project cost pursuant to section 13(k) of the COA.

The charges for these projects will be included in PacifiCorp's February transmission bill to be sent in March 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00358697	Malin Substation – Replace Analog Transfer Trip Equipment	2018	Work Order Cancelled
00379615	Malin Substation – Malin Physical Security Enhancements	2016	Not applicable to COA
TBD Alvey 04	Alvey Substation – Replace Line Loss Logic Equipment for Marion Alvey Line	2016, 2018	Replaced by Work Order 00339242
TBD Alvey 05	Alvey Substation – Replace Equipment Related to Line Loss Logic/RAS	2016, 2018	Replaced by Work Order 00339242

If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud bpa gov  
Date: 2018 02 12 15:55:59  
-08'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Mr. Eric Carter, Bonneville Power Administration

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

June 1, 2018

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Enclosed for your records are two updated Exhibits: Exhibit F, Revision No. 1 and Exhibit G Revision No. 1 of the PNW AC Intertie Capacity Ownership Agreement, Contract No. DE-MS79-95BP94628, between the Bonneville Power Administration and PacifiCorp.

A draft Exhibit F, Revision No. 1 and draft Exhibit G, Revision No. 1 were provided as part of the document packet at the October 26, 2017 3<sup>rd</sup> AC Capacity Owners Annual Meeting.

The primary changes identified under Exhibit F, Revision No. 1 are as follows:

1. Add footnotes to clarify information throughout Exhibit F;
2. Add the Shunt Reactor at Alvey Substation, add the breakers and disconnect switches at Slatt Substation, and update several sections in this Exhibit F to reflect equipment added to the Intertie facilities over the years;
3. Add two disconnect switches at Grizzly Substation (for John Day terminals) and two disconnect switches at Marion Substation (for Buckley and Alvey line terminal) that were all inadvertently omitted from the original Exhibit F;
4. Add interchange meter references to Alvey Substation and Captain Jack Substation, add a Relay House to Alvey Substation, and add a Control House to Grizzly Substation and Malin Substation respectively to clarify treatment for these facilities; and
5. Add the percentages for most of the station general facilities at various substations.

The change under Exhibit G, Revision No. 1 is to correct that Turlock Irrigation District is the permanent assignee of Power Resources Cooperative and not Pacific Northwest Generating Cooperative.

If you have any questions regarding this information, please contact me by June 18, 2018 at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



Digitally signed by  
jdo4978@bud.bpa.gov  
Date: 2018.06.01 15:15:12  
-07'00'

Transmission Account Executive  
Transmission Sales

cc:  
Mr. Eric Carter, Bonneville Power Administration

2 Enclosures

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b>		
(Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b>		
<u>Bank No. 5 Terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
 <u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100

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<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100
Station General	100	100

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<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
 <b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
 <b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100
• MOD D#5035	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100
Station General <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>
<b>12. Meridian 500 kV Yard (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>For Dixonville Line Terminal</u>		
• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the Captain Jack Line	50	100

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

August 17, 2018

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Listed in Table 1 below are the Schedule C Replacement Projects energized from November 2014 to December 2017. Table 1 summarizes the work order numbers, project information, and PacifiCorp's pro rata shares of the project costs under Contract No. DE-MS79-95BP94628, PNW AC Intertie Capacity Ownership Agreement (COA). The Schedule Cs referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date <sup>1</sup>	PacifiCorp Cost Share
00248443	Alvey Substation - Install a New Shunt Reactor	10/11/2018	\$121,540
00329379	Marion-Alvey No. 1 - Access Road Improvements	8/19/2018	\$2,571
00335841	Marion-Alvey No. 1 - Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	12/19/2018	\$14,469
00339242	Alvey Substation - Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	10/13/2018	\$8,335

<sup>1</sup> The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed. Section 9(b)(2)(B) of the COA states that Bonneville Power Administration will render the bill for Replacement or Reinforcement Costs within 15 months following the date listed on which the project work order for the Replacement or Reinforcement is closed. When the 9(b)(2)(B) date shown above is in the past, such as for Work Order No. 00348163, it means that the Work Order was closed, but that the Work Order and Operating Plan were later amended. Work Order No. 00348163 was amended to add the John Day Substation project cost pursuant to Section 13(k) of the COA.

Work Order No. for Schedule C	Facility – Project Information	9(b)(2)(B) Date	PacifiCorp Cost Share
00348163	Grizzly-Captain Jack No. 1 - Land Rights Acquisition for Access Road, Structure 156/1	4/11/2018	\$882
00381350	Summer Lake Substation - Upgrade Engine Generator	1/6/2019	\$3,942
00396160	Dixonville Substation - 500 kV Relay Replacements to Meridian (PAC Project)	2/21/2019	\$5,121
00396161	Meridian Substation - 500 kV Relay Replacements to Dixonville (PAC Project)	2/21/2019	\$4,461

The charges for these projects will be included in PacifiCorp's August transmission bill to be sent in September 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
00356249	Sycan Compensation Station - Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	2016, 2019	Not Applicable
00432972	Malin Substation - SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	2019	Work Order cancelled
00449853	Ashe-Marion No. 2 - Emergency Replacement of Access Road	2019	Work Order cancelled
TBD Malin 13	Malin Substaion - Relay Replacement on the Round Mt. No. 1 line	2015, 2017	Combined with TBD Malin 14 project
TBD Malin 14	Malin Substation - Relay Replacement on the Round Mt. No. 2 line	2015, 2016, 2017	Combined into BPA Work Order #00374787
TBD Summerlake 03	Summerlake Substation - Work on BPA Relays on the Grizzly line	2015, 2017	Combined into BPA Work Order #00322042



Work Order No. for Schedule C	Facility – Project Information	Operating Plan(s) Listing this Work Order	Reason
TBD Sycan 01	Sycan Compensation Station - Replace Station Battery	2018	Combined into Work Order #00423702
TBD Sycan 02	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 03	Sycan Compensation Station - Station Service Engine Generator Upgrade	2018	Combined into Work Order #00423702
TBD Sycan 04	Sycan Compensation Station - Update Grounding Equipment	2018	Combined into Work Order #00423702

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,



JUAN OCHOA  
2018.08.17 14:36:28  
-07'00'

Transmission Account Executive  
Transmission Sales

2 Enclosures

cc:

Mr. Eric Carter, Bonneville Power Administration

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

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**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			<u>214</u>		<u>10,407.42</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

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**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

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**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Customer Billing Shares Document for August 17, 2018 Letter**

	A	B	C	D	E	F	G	H	I	J
1	Facility:	Alvey Substation Shunt Reactor	Marion-Alvey No. 1 Access Road	Marion-Alvey No. 1 Access Road - 10 miles	Alvey Substation RAS	Grizzly-Captain Jack No. 1	Summer Lake Substation	Dixonville Substation	Meridian Substation	
2	Work Order Number:	00248443	00329379	00335841	00339242	00348163	00381350	00396160	00396161	
3	Total from Schedule C:	\$13,504,462	\$571,407	\$3,215,307	\$926,164	\$97,994	\$768,448	\$569,028	\$495,691	
4	Exhibit F, BPA percent owned (left hand column) <sup>1/</sup> :	100%	100%	100%	50%	100%	100%	50%	50%	
5	Exhibit F, percent applied to PNW AC (right hand column) <sup>2/</sup> :	100%	50%	50%	100%	100%	57%	100%	100%	
6	Other Proration <sup>3/</sup> :	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
7	Exhibit F, Station General <sup>4/</sup> :	no	no	no	no	no	yes	no	no	
8	Schedule C Total After Proration:	\$13,504,462	\$285,704	\$1,607,654	\$926,164	\$97,994	\$438,015	\$569,028	\$495,691	
9	Customer Percentage Applied from Exhibit G									
10	Avangrid	\$162,054	\$3,428	\$19,292	\$11,114	\$1,176	\$5,256	\$6,828	\$5,948	
11	PacifiCorp	\$121,540	\$2,571	\$14,469	\$8,335	\$882	\$3,942	\$5,121	\$4,461	
12	Puget	\$1,566,518	\$33,142	\$186,488	\$107,435	\$11,367	\$50,810	\$66,007	\$57,500	
13	Seattle	\$621,205	\$13,142	\$73,952	\$42,604	\$4,508	\$20,149	\$26,175	\$22,802	
14	Tacoma	\$148,549	\$3,143	\$17,684	\$10,188	\$1,078	\$4,818	\$6,259	\$5,453	
15	Turlock	\$189,062	\$4,000	\$22,507	\$12,966	\$1,372	\$6,132	\$7,966	\$6,940	
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$2,808,928	\$59,426	\$334,392	\$192,642	\$20,383	\$91,107	\$118,358	\$103,104	
17	<b>Check totals</b>	<b>\$13,504,462</b>	<b>\$285,704</b>	<b>\$1,607,654</b>	<b>\$926,164</b>	<b>\$97,994</b>	<b>\$438,015</b>	<b>\$569,028</b>	<b>\$495,691</b>	
18	Exhibit G									
19	Customer	Percentage								
20	Avangrid	0.0120								
21	PacifiCorp	0.0090								
22	Puget	0.1160								
23	Seattle	0.0460								
24	Tacoma	0.0110								
25	Turlock	0.0140								
26	<b>Total</b>	<b>0.2080</b>								
27	Footnotes									
28	<sup>1/</sup> BPA Percent (%) owned (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.									
29	<sup>2/</sup> Percent (%) applied to PNW AC (right hand column of Exhibit F) is also listed at the top of the Schedule C.									
30	<sup>3/</sup> Other Proration occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.									
31	<sup>4/</sup> Station General refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.									
32	This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.									



## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

September 28, 2018

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Enclosed is the proposed FY 2020 Operating Plan as required by Section 13(b)(2) of the PNW AC Intertie Capacity Ownership Agreement, Contract Number DE-MS79-95BP94628.

Pursuant to the FY 2020 Operating Plan, the projected FY 2020 monthly cost for each Capacity Owner is \$254 per MW-month.

The forecasted FY 2019 monthly cost is \$242 per MW-month, which will be reflected in your monthly transmission bills for the fiscal year starting October 1, 2018.

We will have a comprehensive discussion at the November 1, 2018 Annual Meeting. Prior to that meeting, please review the enclosed documents. If you have any questions regarding this information, please feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Ochoa", is written over a light blue horizontal line.

JUAN OCHOA  
2018.09.28  
15:04:29 -07'00'

Transmission Account Executive  
Transmission Sales

Enclosure

cc:

Mr. Eric Carter, Bonneville Power Administration

**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	\$10,514,691	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	_____	_____
MFUs of the FCRTS	2	3,574	_____	_____
Allocation Factor (Line 1/Line 2)	3	2.27%	_____	_____
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727	_____	_____
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727	_____	_____
Operations functionalization factor (Line 4/Line 5)	6	100.00%	_____	_____
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495	_____	_____
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$40,975,439</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$40,975,439</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$40,975,439</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$928,654</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,431,906</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,360,560</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$163,326,808</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.45%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,009,818</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$159,125</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$66,061,129</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$954,781</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,474,466</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement  
FY 2020**

Exhibit I Page 4  
Prepared Date: 9/28/18

**Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

**Capacity Ownership Agreement  
FY 2020**

**Operating Plan  
EXHIBIT I**

**Schedule C Table of Contents**

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39



**Capacity Ownership Agreement  
 FY 2020  
 Operating Plan  
 EXHIBIT I  
 Schedule C Table of Contents**

Exhibit I Page 6  
 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

**Capacity Ownership Agreement**  
**FY 2020**  
**Operating Plan**  
**EXHIBIT I**  
**Schedule C Table of Contents**

*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: 00335885  
 Project Short Description: Land Rights Acquisition for Access Road, Structure 152/2  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie: 25%  
 Estimated Energization Date: 11/15/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381549  
**Project Short Description:** Replace Breaker Failure Relays  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** 00466505  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2021  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 12  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2019  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

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**Project Work Order:** TBD Dixonville-Meridian 02  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Dixonville-Meridian  
**Exhibit F Section:** A.6. Dixonville-Meridian 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

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Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

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**Project Work Order:** TBD Sand Springs 04  
**Project Short Description:** Replace Station Battery (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/30/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)						
	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2018	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	0	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	0	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	0	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	0	53,294,126
<b>Total General Plant</b>						<b>1,297,309,592</b>	

↑ To D-1

[To Schedule D, Line 1]

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019 TOTAL	FERC ACCOUNT					2020 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<b>Budget Item</b>	<b>General Plant</b>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		<b>169,161,272</b>

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
A. PacifiCorp and related costs	1	\$215,625		
B. Other PNW AC Intertie costs	2			
C. Total Other Costs	3	\$215,625		

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**FY 2020**  
**Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
 Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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## Department of Energy

Bonneville Power Administration  
P.O. Box 61409  
Vancouver, WA 98666-1409

TRANSMISSION SERVICES

November 21, 2018

In reply refer to: TSE/TPP-2

Ms. Laura Raypush-Dombrowsky, Customer Account Manager,  
Transmission  
PacifiCorp  
825 NE Multnomah Street, Suite 1600  
Portland, OR 97232

Subject: Contract No. DE-MS79-95BP94628

Dear Ms. Raypush-Dombrowsky:

Listed in Table 1 below is the Schedule C Replacement Project energized in June 2017. Table 1 summarizes the work order number, project information, and PacifiCorp's pro rata share of the project costs under Contract No. DE-MS79-95BP94628, PNW AC Intertie Capacity Ownership Agreement. The Schedule C referenced in Table 1, the associated Interest Calculation and the Customer Billing Shares Document are enclosed.

**Table 1:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>9(b)(2)(B) Date</b>	<b>PacifiCorp Cost Share</b>
00340156	Marion Substation – Transfer Trip Replacement	11/21/2018	\$1,888

The charge for this project will be included in PacifiCorp's November transmission bill to be sent in December 2018.

In addition, the Schedule Cs listed in Table 2 below, will not be billed for the stated reasons:

**Table 2:**

<b>Work Order No. for Schedule C</b>	<b>Facility – Project Information</b>	<b>Operating Plan(s) Listing this Work Order</b>	<b>Reason</b>
00379612	Grizzly Substation – Physical Security Project	2017	General Plant
00381830	Malin Substation – Replacement of Communication Battery Charger	2017	General Plant
00381831	Fort Rock Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00381833	Sycan Compensation Station – Replacement of Communication Battery Charger	2017	General Plant
00384207	Buckley Substation – Replace Line Relay on Slatt Terminal	2019	Not Applicable
TBD Dixonville 05	Dixonville Substation – Regravel Yard	2018, 2019	Not Applicable

If you have any questions regarding this information, feel free to contact me at (360) 619-6704 or [jdochoa@bpa.gov](mailto:jdochoa@bpa.gov).

Sincerely,

 JUAN OCHOA  
2018.11.21  
11:54:17 -08'00'

Transmission Account Executive  
Transmission Sales

3 Enclosures

cc:  
Mr. Eric Carter, Bonneville Power Administration

**Project Work Order:** 00340156  
**Project Short Description:** Transfer Trip Replacement  
**Project Facility:** Marion Substation  
**Exhibit F Section:** B.11. Marion 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**In Service Date:** 6/2/2017  
**Work Order Completion Date:** 8/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

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**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

*The purpose of this Exhibit F, Revision No. 1 is to: 1) add footnotes to provide clarity throughout Exhibit F; 2) update Section A.12 to reflect the line name change from McNary-Slatt to Coyote Springs-Slatt; 3) update Sections B.1 through B.14 to remove dispatcher one-line identification numbers for BPA and PacifiCorp; 4) update Section B.1 to add the Shunt Reactor at Alvey, add the Alvey Relay House and contents (relays, data systems, etc.), and add the Interchange Meter for the Dixonville 500 kV Transmission Line; 5) add a new Section B.2 for Bakeoven 500 kV Compensation Station; 6) update Sections B.3 through B.16 to add percentages for Station General; 7) update Section B.4 to change reference from Klamath Cogen to Snow Goose, add Shunt Capacitor information, and to add the Interchange Meter for the Malin No. 2 Transmission Line; 8) update Section B.6 to change references from Contract No. DE-MS79-86BP92299 to DE-MS79-94BP94332; 9) update Section B.8 to add the Grizzly Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 10) update Section B.9 to add MODs D#4130 and D#4139 of the breaker-and-a-half scheme for both Grizzly No. 2 and Grizzly No. 1 Line Terminals, respectively, in the John Day Substation that were inadvertently omitted from the original Exhibit F; 11) update Section B.10 to add the Malin Control House and contents (relays, data systems, etc.) to clarify treatment of the Control House; 12) update Section B.11 to add MODs D#4385 and D#4378 in the Buckley Line Terminal and Alvey Line Terminal respectively that were inadvertently omitted from the original Exhibit F; 13) update Section B.12 to reflect that BPA has 50% (not 100%) cost share for the Dixonville Line Terminal; 14) update Section B.13 to change the title from Sand Spring to Sand Springs; 15) update Section B.14 to change from the McNary Line Terminal to the Coyote Springs Line Terminal at Slatt Substation, and; 16) update Section B.14 to add Breakers D#5043 and D#5045 and MODs D#5044 and D#5046 at Slatt Substation.*

### Bonneville's PNW AC Intertie

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>A. TRANSMISSION LINE FACILITIES</b>		
1. <b>Alvey-Dixonville 500 kV</b>	50	100
2. <b>Buckley-Grizzly 500 kV</b>	100	57
3. <b>500 kV Double Circuit between Buckley and Marion</b> that supports the Buckley-Marion Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)	100	25
4. <b>Captain Jack-COB 500 kV</b> <sup>1</sup>	100	100
5. <b>Captain Jack-Malin No. 1 500 kV</b>	100	100
6. <b>Dixonville-Meridian 500 kV</b>	50	100
7. <b>Grizzly-Captain Jack No. 1 500 kV</b>	100	100

<sup>1</sup> BPA owns 6.86 miles (out of 148.86 miles) of the section of the Captain Jack-Olinda 500 kV Line from Captain Jack Substation south to the California/Oregon Border (COB).

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
8. <b>Grizzly-Summer Lake 500 kV</b>	100	57
9. <b>John Day-Grizzly No. 1 500 kV</b>	100	100
10. <b>John Day-Grizzly No. 2 500 kV</b>	100	100
11. <b>Marion-Alvey 500 kV</b>	100	50
12. <b><u>McNary-John Day 500 kV Line Loop into Slatt:</u></b>	100	100
• Coyote Springs <sup>2</sup> -Slatt Str. No. 29/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. No. 1/1 to substation dead end tower, 194 meters		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>B. SUBSTATION FACILITIES</b>		
(Each substation includes associated relays)		
<b>1. Alvey 500 kV Switchyard</b>		
<u>Bank No. 5 Terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD & Ground Switch D#5089/8157	50	100
• MOD D#5090	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
 <u>Marion No. 1 Line Terminal</u>		
• Breaker D#5084	50	100

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<sup>2</sup> Portland General Electric Company's (PGE) Coyote Springs Substation was inserted between BPA's McNary Substation and BPA's Slatt Substations. Further, this update is to reflect the current transmission line name that is consistent with page D-8 of the FY 2019 Operating Plan. Only the portion of the costs associated with McNary-John Day line loop into BPA's Slatt Substation are allocated to the PNW AC Intertie. These costs are now identified as part of the Coyote Springs-Slatt No.1 and Slatt-John Day No. 1 Lines. In addition, the Transmission Tower structure numbers were renumbered from structure 108/1 to 29/1.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 Line Terminal</u>		
• Breaker D#5087	50	100
• MOD & Ground Switch D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
• Interchange Metering	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV Line)</u>		
• MODs & Ground Switches D#5100/8160, 5101/8159, 5102/8158	50	100
• Bypass Breaker D#5103	50	100
<u>180 MVAR Shunt Reactor Bank No. 1</u>		
• Breaker D#5099	100	100
• Isolating Switch D#5098	100	100
• Associated Arresters	100	100
Alvey 500 kV Relay House and contents <sup>3</sup>	50	100
Station General (500 kV Switchyard)	50	100
<b>2. Bakeoven 500 kV Compensation Station</b>		
Series Capacitor Group No. 1 (John Day-Grizzly No. 1 Line) and associated equipment	100	100
Series Capacitor Bank No. 2 (John Day-Grizzly No. 2 Line) and associated equipment	100	100
Station General	100	100

<sup>3</sup> The Alvey 500 kV Relay House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA and PacifiCorp: 50%/50%.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>3. Buckley 500 kV, Gas Insulated Substation</b>		
<u>Slatt No. 1 Line Terminal</u>		
• Breaker D#4967	100	57
• Ground Switch D#7415	100	57
• Isolating Switch & Ground Switch D#4966/7328	100	57
• Isolating Switch & Ground Switch D#4968/7355	100	57
• Ground Switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 Line Terminal</u>		
• Breaker D#4961	100	57
• Ground Switch D#7311	100	57
• Isolating Switch & Ground Switch D#4960/7312	100	57
• Isolating Switch & Ground Switch D#4962/7313	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 Line Terminal</u>		
• Breaker D#4964	100	57
• Ground Switch D#7477	100	57
• Isolating Switch & Ground Switch D#4963/7314	100	57
• Isolating Switch & Ground Switch D#4965/7321	100	57
• Ground Switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>4. Captain Jack 500 kV</b>		
<u>Series Capacitor Bank No. 1 (Captain Jack-Olinda Line)</u>	100	100
• MOD D#4973	100	100
• MOD D#4974	100	100
• MOD D#4975	100	100
• MOD D#8099	100	100
• MOD D#8100	100	100
• MOD D#8101	100	100
• Bypass Breaker D#4971	100	100
• Bypass Breaker D#4972	100	100
<u>Shunt Capacitor Banks No. 2 and No. 3</u>	100	100
• Breaker D#4926	100	100
• Breaker D#4928	100	100
• MOD D#4925	100	100
• MOD D#4927	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD & Ground Switch D#4991/8104	100	100
• MOD D#4992	100	100
• MOD & Ground Switch D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 Line Terminal</u>		
• Breaker D#4996	100	100
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Olinda No. Line Terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
<u>Bay 3 – Malin No. 2 and Snow Goose Line Terminals</u>		
• Breaker D#4924	100	100
• Breaker D#4983 <sup>4</sup>	0	100
• Breaker D#4986	0	100
• MOD D#4923	100	100
• MOD D#4982	0	100
• MOD D#4984	0	100
• MOD D#4985	0	100
• MOD D#4987	0	100
• MOD D#4988	0	100
• Ground Switch D#8102	0	100
• Ground Switch D#8103	0	100
• Interchange Metering <sup>5</sup>	0	100
Station General	100	100

<sup>4</sup> Bay 3 equipment at Captain Jack Substation, with exception of D#4923 and D#4924, is owned by PacifiCorp but is 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>5</sup> Bay 3 Interchange Metering at Captain Jack Substation is 50%/50% cost shared with PacifiCorp via Contract No. DE-MS79-94BP94332. 100% ownership lies with PacifiCorp. Note: Bonneville does the construction work.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>5. Chief Joseph Substation</b>		
230 kV, 1400 MW Braking Resistor includes Breaker D#A-594, a High Speed Vacuum Switch and one 230 kV Isolating Switch in Bay 12	100	100
Station General	100	6 <sup>6</sup>
<b>6. Dixonville 500 kV Station (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>Alvey and Meridian Line Terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of Line Terminal PTs	50	100
• Two sets of Line Terminal Arresters	50	100
Series Capacitor Bank (Alvey-Dixonville 500 kV Line) and associated isolating devices	50	100
180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General (if for PNW AC Intertie)	50	100
<b>7. Fort Rock 500 kV Compensation Station)</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake Line) and associated equipment	100	100
Station General	100	100

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<sup>6</sup> Cost Sharing of Station General at Chief Joseph Substation is based on 1 out of 17 terminals applicable to the PNW AC Intertie.



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>8. Grizzly 500 kV</b>		
<u>John Day No. 1 Line Terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4056	100	100
• MOD & Ground Switch D#4057/7848	100	100
• MOD D#4059	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 Line Terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD & Ground Switch D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 Line Terminal</u>		
• Breaker D#5028	100	100
• Breaker D#5031	100	100
• MOD D#5027	100	100
• MOD D#5029	100	100
• MOD & Ground Switch D#5030/8122	100	100
• MOD D#5032	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#5034	100	100
• Breaker D#5037	100	100
• MOD D#5033	100	100
• MOD D#5035	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• MOD & Ground Switch D#5036/8123	100	100
• MOD D#5038	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake Line Terminal</u>		
• Breaker D#5025	100	100
• MOD D#5024	100	100
• MOD & Ground Switch D#5026/8121	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 3 and Neutral Reactor</u>	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral Isolating Switch & Ground Switch D#4081/4109	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
North Main Bus 500 kV PTs	100	100
South Main Bus 500 kV PTs	100	100
Grizzly Control House and contents <sup>7</sup>	60	100
Station General <sup>7</sup>	60	100

<sup>7</sup> Site improvements at Grizzly, including the Control House and contents therein (relays, data systems, etc.) is an undivided ownership between BPA and PGE: 60%/40% respectively.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>9. John Day 500 kV</b>		
<u>Grizzly No. 2 Line Terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4130	100	50
• MOD D#4132	100	50
• MOD & Ground Switch D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No. 1 Line Terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4139	100	50
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General	100	11 <sup>8</sup>
<b>10. Malin 500 kV</b>		
<u>Captain Jack No. 1 Line Terminal</u>		
• Breaker D#4064	100	100
• Breaker D#4066	100	100
• MOD D#4065	100	100
• MOD & Ground Switch D#4067/7849	100	100
• MOD D#4068	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

<sup>8</sup> Cost Sharing of Station General at John Day Substation is based on 2 out of 18 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<u>Round Mountain No. 1 Line Terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain No. 2 Line Terminal</u>		
• Breaker D#4582	50	100
• MOD & Ground Switch D#4074/7856	75	100
• MOD D#4581	50	100
• MOD D#4583	50	100
<u>Grizzly No. 2/Round Mountain No. 2 Line Position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
North Main Bus 500 kV PTs	50	100
South Main Bus 500 kV PTs	100	100
300 MVAR Shunt Reactor Bank No. 1 and Associated Arresters and Isolating Devices (D#4327, D#4393)	100	100
2-239 MVAR Shunt Capacitor Bank Nos. 3 and 4 and Associated Isolating Devices (D#4181, D#4182, D#4183, D#4184, D#8065, D#8066)	100	100
Line Protective Relays for Summer Lake Line <sup>9</sup>	0	100
Malin Control House and contents <sup>10</sup>	50	100
Station General	Varies <sup>11</sup>	100

<sup>9</sup> Line Relays at Malin Substation on the Summer Lake line are owned by PacifiCorp but cost shared 50%/50% with PacifiCorp via Contract No. DE-MS79-94BP94332.

<sup>10</sup> The Malin Control House and contents (relays, data systems, etc.) therein is an undivided ownership between BPA, PacifiCorp and PGE: 50%/25%/25%, respectively.

<sup>11</sup> BPA's ownership share of Station General at Malin Substation varies by equipment type.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
<b>11. Marion 500 kV</b>		
<u>Buckley Line Terminal</u>		
• Breaker D#4386	100	25
• Breaker D#4389	100	50
• MOD D#4385	100	25
• MOD D#4387	100	25
• MOD & Ground Switch D#4388/7751	100	50
• MOD D#4390	100	50
• Associated Line PTs	100	50
<u>Alvey Line Terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4373	100	50
• MOD & Ground switch D#4375/7922	100	50
• MOD D#4376	100	25
• MOD D#4378	100	25
• Associated Line PTs	100	50
Station General	100	22 <sup>12</sup>
<b>12. Meridian 500 kV Yard (BPA/PacifiCorp)</b>		
<u>Note:</u> All work at this jointly owned substation will be performed by PacifiCorp. PacifiCorp will invoice BPA for BPA's share of the cost per Bonneville-PacifiCorp Contract No. DE-MS79-94BP94332, as revised or amended.		
<u>For Dixonville Line Terminal</u>		
• Breakers 11R2, 11R6	50	100
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	50	100
• One set of Line PTs	50	100
• One set of Line Terminal Arresters for the Dixonville Line and one set for the Captain Jack Line	50	100

<sup>12</sup> Cost Sharing of Station General at Marion Substation is based on 2 out of 9 terminals applicable to the PNW AC Intertie.

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV Line and associated isolating devices	50	100
Relaying, Controls and Data System Equipment inside the 500 kV Control House associated with the 500 kV equipment	50	100
Station General (if for PNW AC Intertie)	50	100
<b>13. Sand Springs 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Grizzly-Summer Lake line) and associated equipment	100	100
Station General	100	100
<b>14. Slatt 500 kV</b>		
<u>John Day Line Terminal</u>		
• Breaker D#5018	100	50
• Breaker D#5021	100	100
• MOD D#5019	100	50
• MOD & Ground Switch D#5020/7022	100	100
• MOD D#5022	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Coyote Springs Line Terminal</u>		
• Breaker D#5043	100	50
• Breaker D#5045	100	100
• MOD & Ground Switch D#5023/7847	100	100
• MOD D#5044	100	50
• MOD D#5046	100	100
• Associated Terminal Arresters	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
• Associated Line PTs	100	100
Station General	100	18 <sup>13</sup>
<b>15. Sycan 500 kV Compensation Station</b>		
Series Capacitor Bank No. 1 (Grizzly-Captain Jack Line) and associated equipment	100	100
Series Capacitor Bank No. 3 (Summer Lake-Malin Line) and associated equipment but excluding PacifiCorp's Bypass MOD D#5065 and transmission tower	65	100
Station General Bank No. 1	100	100
Station General Bank No. 3	65	100
<b>16. Summer Lake 500 kV</b>		
<u>Grizzly Line Terminal</u>		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD & Ground Switch D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line Protective Relays <sup>14</sup>	0	100
Station General	100	57

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<sup>13</sup> Cost Sharing of Station General at Slatt Substation is based on 2 out of 11 terminals applicable to the PNW AC Intertie.

<sup>14</sup> Line relays at Summer Lake Substation on the Malin Transmission Line are 50%/50% cost shared between BPA and PacifiCorp via Contract No. DE-MS79-94BP94332.

*The purpose of this Revision No. 1 in the table below is to update the Capacity Owner name to reflect the permanent assignment from Power Resource Cooperative (PRC) to Turlock Irrigation District effective January 1, 2016.<sup>1</sup>*

### Capacity Owners

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
<b>PSE</b>	DE-MS79-94BP94521	400	11.6
<b>Seattle</b>	DE-MS79-94BP94522	160	4.6
<b>Turlock</b>	DE-MS79-94BP94523	50	1.4
<b>Tacoma Power</b>	DE-MS79-94BP94524	41	1.1
<b>Snohomish</b>	DE-MS79-94BP94525	42	1.2
<b>PacifiCorp</b>	DE-MS79-95BP94628	32	0.9

**PSE** Puget Sound Energy, Inc. formerly called Puget Sound Power & Light Company

**Seattle** The City of Seattle, City Light Department aka Seattle City Light

**Turlock** Turlock Irrigation District

**Tacoma Power** City of Tacoma, Department of Public Utilities, Light Division dba Tacoma Power

**Snohomish** Public Utility District No. 1 of Snohomish County

**PacifiCorp** PacifiCorp

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<sup>1</sup> Pacific Northwest Generating Company was updated to reflect PRC on November 30, 2000.



**FY 2016 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2					
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$4,748,125				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 4/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order since 2013. This Work Order cost will be updated once BPA receives updated information from PacifiCorp.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared Date: 1/28/2019

**Project Work Order:** TBD Grizzly 02  
**Project Short Description:** Replace SCADA/Sequential Event Recorder (BPA Project)  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this Schedule C may be subject to 60% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** TBD Malin 18  
**Project Short Description:** Replace Sequential Event Recorder (BPA Project)  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 5/31/2021  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2015 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00374787  
**Project Short Description:** Replace Round Mountain Relays  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.10. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 12/11/2017  
**Work Order Completion Date:** 1/17/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/17/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$932,978				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$466,489				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$103,916				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,503,383				

**Notes:**

- 1/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 2/ This work order was previously TBD Round Mountain No. 01 and TBD Malin 07, 08, 09, 10, 11, 12 per notice in letters dated 6/30/2016 and 2/17/2017, respectively.
- 3/ Pursuant to Contract Nos. 14-03-29224, 14-03-29225 and DE-MS79-94BP94332 with PacifiCorp and/or Portland General Electric this Schedule C may be subject to 50% allocation to determine the BPA costs associated with this Work Order.
- 4/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

Exhibit I

Prepared date: 1/28/2019

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**In Service Date:** 1/31/2018  
**Work Order Completion Date:** 2/22/2018  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 5/22/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ Pursuant to Section A.3 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2017-2018.
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2018 Schedule C**

Exhibit I  
Prepared date: 1/28/2019

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** CLOSED  
**Contract Section 9(b)(2)(B) Date:** 2/27/2019

	Line		Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.						
<b>III. Replacement Costs and Reinforcement Costs</b>							
<b>A. Direct Cost</b>							
Direct Costs of Replacements and Reinforcements	1		\$1,034,679	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>							
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2		\$517,340	_____	_____	_____	_____
<b>C. AFUDC</b>							
AFUDC of Replacements and Reinforcements	3		\$22,764	_____	_____	_____	_____
<b>D. Interest</b>							
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>							
(Lines 1 + 2 + 3 + 4)	5		\$1,574,783	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year applicable to this work order is FY 2019.

This information is being released externally by BPA on 1/28/2019 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: 00340156  
 Project Short Description: Transfer Trip Replacement  
 Project Facility: Marion Substation  
 Exhibit F Section: B.11. Marion 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 50%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 8/21/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 11/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,659,057	1,659,057.49	757,144.08	\$901,913	(\$757,144)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$829,529	478,287.80	218,276.21	\$260,012	(\$569,517)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$229,761	95,119.80	43,409.82	\$51,710	(\$178,051)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$46,136	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,718,347	\$2,232,465	\$1,018,830	\$1,259,771	(\$1,504,712)

**Notes:**

- 1/ For this Work Order, only one out of three terminals applies, so 33.3% of the costs will be applicable to the Capacity Owners.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$1,259,771 reflects the total costs from FY 2014-2018.
- 3/ Cost sharing percentage x One out of three terminals x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 50% x 33.3% x 20.8% x \$1,259,771 = \$43,629 to be allocated pro rata among Capacity Owners.
- 4/ The 9(b)(2)(B) date is the date 15 months after the date on which the project work order for each Replacement or Reinforcement is closed and will not receive additional charges.

This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00340156**  
**Work Order Completion Date 08/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
8/1/2017	9/30/2018		426	\$1,213,635	\$46,136.38
8/1/2017	8/30/2017	3.159%	30		\$3,150.81
8/31/2017	9/29/2017	3.170%	30		\$3,161.67
9/30/2017	10/30/2017	3.208%	31		\$3,306.76
10/31/2017	11/29/2017	3.216%	30		\$3,208.32
11/30/2017	12/30/2017	3.225%	31		\$3,324.20
12/31/2017	1/30/2018	3.237%	31		\$3,336.57
1/31/2018	2/27/2018	3.239%	28		\$3,015.90
2/28/2018	3/30/2018	3.262%	31		\$3,362.42
3/31/2018	4/29/2018	3.281%	30		\$3,272.80
4/30/2018	5/31/2018	3.302%	32		\$3,513.39
6/1/2018	6/20/2018	3.316%	20		\$2,205.43
6/21/2018	6/29/2018	3.316%	9		\$992.44
6/30/2018	7/30/2018	3.332%	31		\$3,434.66
7/31/2018	8/30/2018	3.347%	31		\$3,450.15
8/31/2018	9/29/2018	3.301%	30		\$3,292.88
9/30/2018	9/30/2018	3.247%	1		\$107.98
			426		\$46,136.38

**Equipment Removal Cost Summary**

\$69,576.46 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$56,551.02 is direct cost and \$13,025.44 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

## Customer Billing Shares Document for November 21, 2018 Letter

	A	B
1	<b>Facility:</b>	<b>Marion Substation Transfer Trip Replacement</b>
2	<b>Work Order Number:</b>	<b>00340156</b>
3	<b>Total from Schedule C:</b>	\$1,259,771
4	<b>Exhibit F, BPA percent owned (left hand column)<sup>1/</sup>:</b>	100%
5	<b>Exhibit F, percent applied to PNW AC (right hand column)<sup>2/</sup>:</b>	50%
6	<b>Other Proration<sup>3/</sup>:</b>	33.3%
7	<b>Exhibit F, Station General<sup>4/</sup>:</b>	no
8	<b>Schedule C Total After Proration:</b>	<b>\$209,752</b>
9	<b>Customer Percentage Applied from Exhibit G</b>	
10	Avangrid	\$2,517
11	PacifiCorp	\$1,888
12	Puget	\$24,331
13	Seattle	\$9,649
14	Tacoma	\$2,307
15	Turlock	\$2,937
16	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$43,629
17	<b>Check totals</b>	<b>\$209,752</b>
18	<b>Exhibit G</b>	
19	<b>Customer</b>	<b>Percentage</b>
20	Avangrid	0.0120
21	PacifiCorp	0.0090
22	Puget	0.1160
23	Seattle	0.0460
24	Tacoma	0.0110
25	Turlock	0.0140
26	<b>Total</b>	<b>0.2080</b>
27	<b>Footnotes</b>	
28	<sup>1/</sup> <b>BPA Percent (%) owned</b> (left hand column of Exhibit F) reflects BPA's ownership share of each project and is included here for reference only, as row 3 above reflects only BPA's cost share of the project.	
29	<sup>2/</sup> <b>Percent (%) applied to PNW AC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.	
30	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.	
31	<sup>4/</sup> <b>Station General</b> refers to elements in a substation that are not attributable to specific pieces of power equipment. Examples include control houses, water/drainage systems, fences, and yard rock.	
32	This information is being released externally by BPA on 11/21/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.	

**Project Work Order:** 00339633  
**Project Short Description:** Security Enhancements  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 9/30/2016  
**Work Order Completion Date:** 4/7/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,246,384	\$4,077,903	\$1,044,147	\$3,033,756	(\$1,212,628)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,123,192	\$1,015,644	\$260,056	\$755,589	(\$1,367,603)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$491,733	\$108,138	\$27,689	\$80,449	(\$411,284)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$81,678	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,861,309	\$5,201,685	\$1,331,891	\$3,951,472	(\$2,991,516)

**Notes:**

- 1/ This work order will be prorated for 5.9% to reflect that at Chief Joseph Substation, 1 out of 17 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$3,951,472 reflects the total costs from FY 2013-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2014-2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 5.9% x \$3,951,472 = \$48,492 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339633**  
**Work Order Completion Date 04/07/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$3,869,793	\$81,678.35
4/1/2017	4/29/2017	3.108%	29		9,555.95
4/30/2017	5/30/2017	3.121%	31		10,257.71
5/31/2017	6/29/2017	3.130%	30		9,955.44
6/30/2017	7/30/2017	3.143%	31		10,331.44
7/31/2017	8/30/2017	3.159%	31		10,381.55
8/31/2017	9/29/2017	3.170%	30		10,081.30
9/30/2017	10/30/2017	3.208%	31		10,543.92
10/31/2017	11/30/2017	3.216%	31		10,571.04
			244		81,678.35

**Equipment Removal Cost Summary**

\$374,186.59 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$303,254.50 is direct cost and \$70,932.09 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356246  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 1/13/2017  
**Work Order Completion Date:** 4/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/21/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$446,010	\$129,146	\$124,206	\$4,940	(\$441,070)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$223,005	\$53,529	\$51,482	\$2,047	(\$220,958)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$44,814	\$3,483	\$3,350	\$133	(\$44,681)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$150	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$713,829	\$186,158	\$179,038	\$7,271	(\$706,709)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$7,271 reflects the total costs from FY 2014-2018.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2018.
- 3/ Pursuant to Contract Nos. 14-03-56747 and DE-MS79-86BP92277 with Portland General Electric this project is subject to 60% allocation. This Schedule C reflects only BPA's share of the costs associated with this work order.
- 4/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$7,271 = \$1,512 to be allocated pro rata among Capacity Owners.

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**Work Order 00356246**  
**Work Order Completion Date 04/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$7,120	\$150.28
4/1/2017	4/29/2017	3.108%	29		17.58
4/30/2017	5/30/2017	3.121%	31		18.87
5/31/2017	6/29/2017	3.130%	30		18.32
6/30/2017	7/30/2017	3.143%	31		19.01
7/31/2017	8/30/2017	3.159%	31		19.10
8/31/2017	9/29/2017	3.170%	30		18.55
9/30/2017	10/30/2017	3.208%	31		19.40
10/31/2017	11/30/2017	3.216%	31		19.45
			244		150.28

**Equipment Removal Cost Summary**

\$122.90 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$74.49 is direct cost and \$48.42 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00356248  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**In Service Date:** 2/28/2017  
**Work Order Completion Date:** 5/5/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 8/5/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215	\$100,523	\$0	\$100,523	(\$66,692)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608	\$42,380	\$0	\$42,380	(\$41,228)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$17,557	\$3,933	\$0	\$3,933	(\$13,624)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4			\$0	\$2,724	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$268,379	\$146,836	\$0	\$149,560	(\$121,544)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$149,560 reflects the total costs from FY 2014-2017.
- 2/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal years that are applicable to this work order are FY 2015-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$149,560 = \$31,108 to be allocated pro rata among Capacity Owners.

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**Work Order 00356248**  
**Work Order Completion Date 5/5/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$146,836	\$2,724.05
5/1/2017	5/30/2017	3.121%	30		376.68
5/31/2017	6/29/2017	3.130%	30		377.71
6/30/2017	7/30/2017	3.143%	31		392.02
7/31/2017	8/30/2017	3.159%	31		393.92
8/31/2017	9/29/2017	3.170%	30		382.53
9/30/2017	10/30/2017	3.208%	31		400.08
10/31/2017	11/30/2017	3.216%	31		401.11
			214		2,724.05

**Equipment Removal Cost Summary**

\$3,242.20 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$2,157.40 is direct cost and \$1,084.76 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.



**Project Work Order:** 00401519  
**Project Short Description:** Station Service Cable Replacement  
**Project Facility:** John Day Substation  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 3 below  
**In Service Date:** 4/29/2016  
**Work Order Completion Date:** 11/7/2016  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/7/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$202,870	\$202,670	\$0	\$202,670	(\$200)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$101,435	\$60,366	\$0	\$60,366	(\$41,069)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$4,224	\$3,205	\$0	\$3,205	(\$1,019)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$3,374	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$308,529	\$266,241	\$0	\$269,615	(\$42,288)

**Notes:**

- 1/ This work order will be prorated for 11.1% to reflect that at John Day Substation, 2 out of 18 terminals support the AC Intertie.
- 2/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$269,615 reflects the total costs from FY 2016-2017.
- 3/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 4/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 5/ The forecast for this work order was amended per letter dated December 22, 2017.
- 6/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x 11.1% x \$269,615 = \$6,225 to be allocated pro rata among Capacity Owners.

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**Work Order 00401519**  
**Work Order Completion Date 11/07/2016**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2016	11/30/2017		395	\$266,241	\$3,373.78
11/1/2016	11/29/2016	3.065%	29		648.35
11/30/2016	12/30/2016	3.079%	31		696.23
12/31/2016	1/30/2017	3.086%	31		697.81
1/31/2017	2/27/2017	3.091%	28		631.31
2/28/2017	3/30/2017	3.096%	31		700.08
3/31/2017	4/29/2017	3.108%	30		680.09
4/30/2017	5/30/2017	3.121%	31		705.75
5/31/2017	6/29/2017	3.130%	30		684.86
6/30/2017	7/30/2017	3.143%	31		710.80
7/31/2017	8/30/2017	3.159%	31		714.25
8/31/2017	9/29/2017	3.170%	30		693.59
9/30/2017	10/30/2017	3.208%	31		725.42
10/31/2017	11/30/2017	3.216%	31		727.29
			<b>395</b>		<b>3,373.78</b>

**Equipment Removal Cost Summary**

\$2,004.54 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$1,382.44 is direct cost and \$622.10 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00404279  
**Project Short Description:** Emergency Replacement of Transfer Switch - Bank No. 1  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** Please see footnote # 2 below  
**In Service Date:** 12/22/2016  
**Work Order Completion Date:** 4/10/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 7/10/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,988	\$88,988	\$0	\$88,988	(\$0)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,494	\$36,118	\$0	\$36,118	(\$8,376)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$3,321	\$1,292	\$0	\$1,292	(\$2,029)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without Plant Costs)	4				\$2,668	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$136,803	\$126,398	\$0	\$129,066	(\$10,405)

**Notes:**

- 1/ Pursuant to Sec. 13(c)(3), for each work order, costs are tracked by fiscal year. The adjusted actual of \$129,066 reflects the total costs from FY 2016-2017.
- 2/ Exhibit F does not specify percentages for Station General. Cost sharing for Station General is determined on a case by case basis to reflect how the project supports the AC Intertie.
- 3/ At the top of this Exhibit the first fiscal year related to this work order is listed. The other fiscal year that is applicable to this work order is FY 2017.
- 4/ The forecast for this work order was amended per letter dated December 22, 2017.
- 5/ Cost sharing percentage x Capacity Owner share of BPA cost x Line 5 Adjusted Actuals = Capacity Owners' share of project cost. For this project, the calculation is 100% x 20.8% x \$129,066 = \$26,846 to be allocated pro rata among Capacity Owners.

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**Work Order 00404279**  
**Work Order Completion Date 04/10/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
4/1/2017	11/30/2017		244	\$126,398	\$2,667.80
4/1/2017	4/29/2017	3.108%	29		312.12
4/30/2017	5/30/2017	3.121%	31		335.05
5/31/2017	6/29/2017	3.130%	30		325.14
6/30/2017	7/30/2017	3.143%	31		337.45
7/31/2017	8/30/2017	3.159%	31		339.09
8/31/2017	9/29/2017	3.170%	30		329.28
9/30/2017	10/30/2017	3.208%	31		344.39
10/31/2017	11/30/2017	3.216%	31		345.28
			244		2,667.80

**Equipment Removal Cost Summary**

\$6,889.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this work order. Of this amount, \$4,223.40 is direct cost and \$2,665.90 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Customer Billing Shares Document for February 12, 2018 Letter

	A	B	C	D	E	F
1	<b>Facility:</b>	Chief Joseph Substation	Grizzly Substation	Sand Spring Compensation Station	John Day Substation	Fort Rock Compensation Station
2	<b>Work Order Number:</b>	<b>00339633</b>	<b>00356246</b>	<b>00356248</b>	<b>00401519</b>	<b>00404279</b>
3	<b>Total from Schedule C:</b>	\$3,951,472	\$7,271	\$149,560	\$269,615	\$129,066
4	<b>Exhibit F, BPA % owned (left hand column):</b>	n/a	n/a	100%	100%	100%
5	<b>Exhibit F, % applied to PNWAC (right hand column) <sup>1/</sup>:</b>	n/a	100%	100%	n/a	100%
6	<b>Intertie Contract Proration <sup>2/</sup>:</b>	n/a	60% <sup>2/</sup>	n/a	n/a	n/a
7	<b>Other Proration <sup>3/</sup>:</b>	5.9%	n/a	n/a	11.1%	n/a
8	<b>Exhibit F, Station General <sup>4/</sup>:</b>	yes	no	no	yes	yes
9	<b>Schedule C Total After Proration:</b>	<b>\$233,137</b>	<b>\$7,271</b>	<b>\$149,560</b>	<b>\$29,927</b>	<b>\$129,066</b>
10	<b>Customer % applied from Exhibit G</b>					
11	Puget	\$27,044	\$843	\$17,349	\$3,472	\$14,972
12	Seattle	\$10,724	\$334	\$6,880	\$1,377	\$5,937
13	Turlock	\$3,264	\$102	\$2,094	\$419	\$1,807
14	Tacoma	\$2,565	\$80	\$1,645	\$329	\$1,420
15	Avangrid	\$2,798	\$87	\$1,795	\$359	\$1,549
16	PacifiCorp	\$2,098	\$65	\$1,346	\$269	\$1,162
17	Amount for cost sharing percentage note (formula that includes 20.8%) in Schedule C	\$48,492	\$1,512	\$31,108	\$6,225	\$26,846
18	<i>Check totals</i>	<i>\$233,137</i>	<i>\$7,271</i>	<i>\$149,560</i>	<i>\$29,927</i>	<i>\$129,066</i>
19	<b>Exhibit G</b>					
20	<b>Customer</b>	<b>Percentage</b>				
21	Puget	0.1160				
22	Seattle	0.0460				
23	Turlock	0.0140				
24	Tacoma	0.0110				
25	Avangrid	0.0120				
26	PacifiCorp	0.0090				
27	<b>Total</b>	<b>0.2080</b>				
28	<b>Footnotes</b>					
29	<sup>1/</sup> <b>Percent (%) applied to PNWAC</b> (right hand column of Exhibit F) is also listed at the top of the Schedule C.					
30	<sup>2/</sup> <b>Intertie Contract Proration</b> refers to contracts with PacifiCorp and PGE. In some cases the intertie cost proration is reflected in the Exhibit F to the specific Schedule C. As applicable, the percentage on row 7, above, is the cost percentage after the PacifiCorp/PGE costs are removed. If cell D7 is shaded and in italics, it means the Exhibit F percentage does not need to be applied to this cost share calculation.					
31	<sup>3/</sup> <b>Other Proration</b> occurs when a project supports both intertie and non-intertie uses. Examples include replacing multiple breakers at a substation where only a subset of the replacements support the Intertie, station general replacements, or work on a line that is part Network and part Intertie. In such cases a prorated share of the project costs are assigned to the Capacity Owners.					
32	<sup>4/</sup> <b>Station General</b> is general expenses related to a particular substation that do not relate to specific pieces of power equipment. Examples include control houses, fences, gravel or security equipment. If the equipment in the work order is classified as station general and has a cost share percentage it will be displayed above.					
33	This information is being released externally by BPA on 2/12/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.					

Project Work Order: 00248443  
 Project Short Description: Install a New Shunt Reactor  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 100%  
 In Service Date: 2/24/2017  
 Work Order Completion Date: 7/11/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138	\$9,485,755	\$0	\$9,485,755	(\$453,383)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569	\$2,788,342	\$0	\$2,788,342	(\$2,181,227)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206	\$1,052,746	\$0	\$1,052,746	(\$1,565,460)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$177,618	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$17,526,913	\$13,326,844	\$0	\$13,504,462	(\$4,200,069)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$13,504,462 reflects the total costs from FY 2010-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$13,504,462 = \$2,808,928 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00248443**  
**In Service Date 7/11/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	11/30/2017		153	\$13,326,844	\$177,618.02
7/1/2017	7/30/2017	3.143%	30		34,431.83
7/31/2017	8/30/2017	3.159%	31		35,752.12
8/31/2017	9/29/2017	3.170%	30		34,718.10
9/30/2017	10/30/2017	3.208%	31		36,311.29
10/31/2017	11/30/2017	3.216%	31		36,404.68
			153		177,618.02

**Equipment Removal Cost Summary**

\$8,291.40 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$5,025.09 is direct cost and \$3,266.31 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00329379  
 Project Short Description: Access Road Improvements  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 12/15/2017  
 Work Order Completion Date: 5/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 8/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732	\$561,000	\$0	\$561,000	(\$167,732)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366	\$0	\$0	\$0	(\$364,366)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402	\$0	\$0	\$0	(\$126,402)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4			\$0	\$10,407	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$1,219,500	\$561,000	\$0	\$571,407	(\$658,500)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$571,407 reflects the total costs from FY 2013-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$571,407 = \$59,426 to be allocated pro rata among Capacity Owners.

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**Work Order 00329379  
In Service Date 5/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
5/1/2017	11/30/2017		214	\$561,000	\$10,407.42
5/1/2017	5/30/2017	3.121%	30		1,439.13
5/31/2017	6/29/2017	3.130%	30		1,443.07
6/30/2017	7/30/2017	3.143%	31		1,497.74
7/31/2017	8/30/2017	3.159%	31		1,505.00
8/31/2017	9/29/2017	3.170%	30		1,461.47
9/30/2017	10/30/2017	3.208%	31		1,528.54
10/31/2017	11/30/2017	3.216%	31		1,532.47
			214		10,407.42

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00335841  
 Project Short Description: Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)  
 Project Facility: Marion-Alvey No. 1  
 Exhibit F Section: A.9. Marion-Alvey 500 kV  
 Percent of Project Cost Applied to PNW AC Intertie: 50%  
 In Service Date: 2/15/2017  
 Work Order Completion Date: 9/19/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 12/19/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,980,395	\$2,467,799	\$0	\$2,467,799	(\$512,596)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,490,198	\$622,061	\$0	\$622,061	(\$868,136)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$399,579	\$91,364	\$0	\$91,364	(\$308,215)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$34,083	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$4,870,172	\$3,181,224	\$0	\$3,215,307	(\$1,688,948)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ The percent applicable to the PNW AC Intertie for this Work Order is 50%. Reference Exhibit F, % PNW AC Intertie column.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$3,215,307 reflects the total costs from FY 2013-2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 50% x 20.8% x \$3,215,307 = \$334,392 to be allocated pro rata among Capacity Owners.
- 4/ The forecast for this Work Order was amended per letter dated 12/22/2017.

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**Work Order 00335841**  
**Work Order Completion Date 9/19/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/1/2017	12/31/2017		122	\$3,181,224	\$34,083.37
9/1/2017	9/29/2017	3.170%	29		8,011.24
9/30/2017	10/30/2017	3.208%	31		8,667.79
10/31/2017	11/29/2017	3.216%	30		8,409.76
11/30/2017	12/31/2017	3.225%	32		8,994.58
			122		34,083.37

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

Project Work Order: 00339242  
 Project Short Description: Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.5. Alvey 500 kV  
 Percent of Project Cost Applied to PNWAC Intertie: 100%  
 In Service Date: 6/2/2017  
 Work Order Completion Date: 7/13/2017  
 Work Order Status: COMPLETE  
 Contract Section 9(b)(2)(B) Date: 10/13/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998	\$683,386	\$0	\$683,386	(\$539,612)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499	\$199,608	\$0	\$199,608	(\$411,891)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$171,894	\$19,076	\$0	\$19,076	(\$152,819)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$24,094	
<b>E. Total Replacement Costs and Reinforcement Costs</b>	5	\$2,006,391	\$902,070	\$0	\$926,164	(\$1,104,322)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$926,164 reflects the total costs from FY 2013-2018.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$926,164 = \$192,642 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00339242**  
**Work Order Completion Date 7/13/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
7/1/2017	4/30/2018		304	\$902,070	\$24,093.97
7/1/2017	7/30/2017	3.143%	30		2,330.63
7/31/2017	8/30/2017	3.159%	31		2,420.00
8/31/2017	9/29/2017	3.170%	30		2,350.00
9/30/2017	10/30/2017	3.208%	31		2,457.85
10/31/2017	11/29/2017	3.216%	30		2,384.68
11/30/2017	12/30/2017	3.225%	31		2,470.81
12/31/2017	4/30/2018	3.237%	121		9,680.00
			304		24,093.97

**Equipment Removal Cost Summary**

\$70,768 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$57,239 is direct cost and \$13,529 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00348163  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 156/1  
**Project Facility:** Grizzly - Captain Jack No. 1  
**Exhibit F Section:** A.4. Grizzly - Captain Jack No. 1 500 kV  
**Percent of Project Cost Applied to**  
**PNW AC Intertie:** 100%  
**In Service Date:** 9/30/2017  
**Work Order Completion Date:** 1/11/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 4/11/2018

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$106,555	\$95,257	\$0	\$95,257	(\$11,298)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$53,278	\$0	\$0	\$0	(\$53,278)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,558	\$0	\$0	\$0	(\$14,558)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$ 2,737	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
	5	\$174,390	\$95,257	\$0	\$97,994	(\$79,133)
(Lines 1 + 2 + 3 + 4)						

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$97,994 reflects the total costs from FY 2014-2017.
- 2/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$97,994 = \$20,383 to be allocated pro rata among Capacity Owners.
- 3/ The forecast for this Work Order was amended per letter dated 12/22/2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00348163**  
**In Service Date 01/11/2017**

**Interest Calculation**

<u>From</u>	<u>To</u>	<u>%</u>	<u>Days</u>	<u>Amount</u>	<u>Interest</u>
1/1/2017	11/30/2017		334	\$95,257	\$2,736.61
1/1/2017	1/30/2017	3.086%	30		241.61
1/31/2017	2/27/2017	3.091%	28		225.87
2/28/2017	3/30/2017	3.096%	31		250.48
3/31/2017	4/29/2017	3.108%	30		243.34
4/30/2017	5/30/2017	3.121%	31		252.51
5/31/2017	6/29/2017	3.130%	30		245.03
6/30/2017	7/30/2017	3.143%	31		254.31
7/31/2017	8/30/2017	3.159%	31		255.55
8/31/2017	9/29/2017	3.170%	30		248.16
9/30/2017	10/30/2017	3.208%	31		259.54
10/31/2017	11/30/2017	3.216%	31		260.21
			<u>334</u>		<u>2,736.61</u>

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 57%  
**In Service Date:** 9/15/2017  
**Work Order Completion Date:** 10/6/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 1/6/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$560,905	\$560,905	\$0	\$560,905	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$280,453	\$167,733	\$0	\$167,733	(\$112,719)
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$45,285	\$19,509	\$0	\$19,509	(\$25,776)
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$20,300	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$886,643	\$748,147	\$0	\$768,448	(\$138,496)

**Notes:**

- 1/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$768,448 reflects the total costs from FY 2015-2018.
- 2/ This Work Order will be subject to proration so that 57% of the cost will be applicable to Capacity Owners while 43% of the cost is Network cost (see top of this Exhibit).
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 57% x 20.8% x \$768,448 = \$91,107 to be allocated pro rata among Capacity Owners.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Work Order 00381350**  
**Work Order Completion Date 10/06/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
10/1/2017	7/31/2018		304	\$748,147	\$20,300.41
10/1/2017	10/30/2017	3.208%	30		1,972.70
10/31/2017	11/29/2017	3.216%	30		1,977.77
11/30/2017	12/30/2017	3.225%	31		2,049.21
12/31/2017	1/30/2018	3.237%	31		2,056.83
1/31/2018	2/27/2018	3.239%	28		1,859.16
2/28/2018	3/30/2018	3.262%	31		2,072.77
3/31/2018	4/29/2018	3.281%	30		2,017.52
4/30/2018	7/31/2018	3.302%	93		6,294.45
			304		20,300.41

**Equipment Removal Cost Summary**

\$5,176.05 worth of retirement charges are included in the adjusted actuals column of the main billing sheet for this Work Order. Of this amount, \$3,137.00 is direct cost and \$2,039.05 is indirect and overhead cost.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396160  
**Project Short Description:** 500 kV Relay Replacements to Meridian (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6 BPA/PacifiCorp Dixonville 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 11/30/2014  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$336,434	\$0	\$336,434	\$0
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$218,682	\$0	\$218,682	\$218,682
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$353	\$0	\$353	\$353
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$13,559	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$555,469	\$0	\$569,028	\$219,035

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$569,028 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$569,028 = \$118,358 to be allocated pro rata among Capacity Owners.
- 4/ These costs were provided by PacifiCorp on April 2017.

This information is being released externally by BPA on 8/17/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Work Order 00396160**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$555,469	\$13,558.63
11/1/2017	11/29/2017	3.216%	29		1,419.47
11/30/2017	12/30/2017	3.225%	31		1,521.45
12/31/2017	1/30/2018	3.237%	31		1,527.11
1/31/2018	2/27/2018	3.239%	28		1,380.35
2/28/2018	3/30/2018	3.262%	31		1,538.95
3/31/2018	4/29/2018	3.281%	30		1,497.93
4/30/2018	7/31/2018	3.302%	93		4,673.37
			273		13,558.63

**Equipment Removal Cost Summary**

There were no retirement charges associated with this Work Order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Project Work Order:** 00396161  
**Project Short Description:** 500 kV Relay Replacements to Dixonville (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project Cost Applied to PNW AC Intertie:** 100%  
**In Service Date:** 8/30/2017  
**Work Order Completion Date:** 11/21/2017  
**Work Order Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:** 2/21/2019

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$336,434	\$293,074	\$0	\$293,074	(\$43,360)
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	\$190,498	\$0	\$190,498	\$190,498
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	\$307	\$0	\$307	\$307
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4				\$11,811	
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$336,434	\$483,879	\$0	\$495,691	\$147,445

**Notes:**

- 1/ BPA owns 50 percent of the equipment covered by this Work Order. PacifiCorp's 50 percent share has already been subtracted from the "Actual" column, so no further adjustment is needed. See Exhibit F, column labeled "% BPA owned" and Contract No. DE-MS79-94BP94332.
- 2/ Pursuant to Section 13(c)(3), for each work order, costs are tracked by Fiscal Year (FY). The adjusted actual of \$495,691 reflects the total costs from FY 2017.
- 3/ Cost sharing percentage x Capacity Owner share of BPA cost x Line E Adjusted Actuals = Capacity Owners' share of project cost. For this project the calculation is 100% x 20.8% x \$495,691 = \$103,104 to be allocated pro rata among Capacity Owners.

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**Work Order 00396161**  
**Work Order Completion Date 11/21/2017**

**Interest Calculation**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
11/1/2017	7/31/2018		273	\$483,879	\$11,811.18
11/1/2017	11/29/2017	3.216%	29		1,236.53
11/30/2017	12/30/2017	3.225%	31		1,325.37
12/31/2017	1/30/2018	3.237%	31		1,330.30
1/31/2018	2/27/2018	3.239%	28		1,202.45
2/28/2018	3/30/2018	3.262%	31		1,340.60
3/31/2018	4/29/2018	3.281%	30		1,304.87
4/30/2018	7/31/2018	3.302%	93		4,071.06
			273		11,811.18

**Equipment Removal Cost Summary**

There were no retirement charges associated with this work order.

- A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown in the attached correspondence are for the work order. Each customer will be billed its pro rata share of the total adjusted actual.
- Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- Expected In Service Date as used in Schedule C is the expected date of completion of the referenced work. If the In Service Date is in the future, it is a forecast and subject to change due to delays such as weather or material availability.
- Complete status as used in Schedule C is an accounting status used by BPA rather than construction status.

**Interest Calculation  
PacifiCorp  
9/30/2016-5/31/2018**

<b>From</b>	<b>To</b>	<b>%</b>	<b>Days</b>	<b>Amount</b>	<b>Interest</b>
9/30/2016	5/31/2018		609	\$5,134	\$271.08
9/30/2016	10/30/2016	3.064%	31		13.36
10/31/2016	11/29/2016	3.065%	30		12.93
11/30/2016	12/30/2016	3.079%	31		13.43
12/31/2016	1/30/2017	3.086%	31		13.46
1/31/2017	2/27/2017	3.091%	28		12.17
2/28/2017	3/30/2017	3.096%	31		13.50
3/31/2017	4/29/2017	3.108%	30		13.12
4/30/2017	5/30/2017	3.121%	31		13.61
5/31/2017	6/29/2017	3.130%	30		13.21
6/30/2017	7/30/2017	3.143%	31		13.71
7/31/2017	8/30/2017	3.159%	31		13.77
8/31/2017	9/29/2017	3.170%	30		13.38
9/30/2017	10/30/2017	3.208%	31		13.99
10/31/2017	11/29/2017	3.216%	30		13.57
11/30/2017	12/30/2017	3.225%	31		14.06
12/31/2017	1/30/2018	3.237%	31		14.12
1/31/2018	2/27/2018	3.239%	28		12.76
2/28/2018	3/30/2018	3.262%	31		14.22
3/31/2018	4/29/2018	3.281%	30		13.85
4/30/2018	5/31/2018	3.302%	32		14.86
			<b>609</b>		<b>271.08</b>

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**Capacity Ownership Agreement**

Exhibit I  
Summary - Page 1  
Updated Date: 7/24/2018

**FY 2017 Operating Plan  
EXHIBIT I  
UPDATED**

**FY 2017 Revised Operating Plan Summary\***

Schedule	Forecast	Updated	Difference	
A	\$2,537,222	\$2,480,440	(\$56,782)	Operations
B	\$3,149,036	\$2,999,423	(\$149,613)	Maintenance
C <sup>1/</sup>	\$0	\$0	\$0	Replacements & Reinforcements
D	\$2,485,604	\$3,266,580	\$780,976	General Plant
E	\$146,212	\$205,987	\$59,775	Other (PacifiCorp)
F	\$397,814	\$381,573	(\$16,240)	Contracts & Rates
G	\$368,694	\$321,058	(\$47,636)	Transmission Scheduling
H	\$0	\$0	\$0	End of Term
<b>Total</b>	<b>\$9,084,581</b>	<b>\$9,655,061</b>	<b>\$570,480</b>	<b>Total</b>

$\$9,655,061 / 3450 \text{ MW} / 12 \text{ Months} =$   $\$233.21 / \text{MW-month}$   
**Rounded to \$233 for whole-dollar billing**

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**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

\*References to the rate case are from documents that support rate case document BP-16 Final. Budget figures are derived from the IPR documents for 2016/2017.

**FY 2017 Amended  
Operating Plan**

**Schedule A for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0	81.0	
MFUs of the FCRTS	2	3,574	3,574	
MFU Allocation Factor (Line 1/Line 2 calculation rounded to two decimals)	3	2.27%	2.27%	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the rate case	4	\$78,999,106	\$79,341,107	
Bonneville's total system operations cost from rate case	5	\$78,999,106	\$79,341,107	
Operations functionalization factor (Line 4/Line 5)	6	100.00%	100.00%	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$67,037,127	\$72,602,467	\$5,565,340
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,519,308	\$1,645,439	\$126,131
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,939,935	\$8,090,268	(\$2,849,667)
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$247,939	\$183,355	(\$64,584)
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$33,973,954	\$28,752,841	(\$5,221,113)
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$769,975	\$651,645	(\$118,330)
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	13	\$2,537,222	\$2,480,440	(\$56,782)

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Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

Data Source: EPM Data Warehouse

Unit of Measure: \$ Thousands

% of Year Elapsed = 100%

	A	B		C		D <Note 1	E	F
	FY 2016	FY 2017					FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast		Actuals	Actuals per Forecast	
<b>Operating Revenues</b>								
<b>Sales</b>								
<b>Network</b>								
Network Integration	\$ 129,695	\$ 133,090	\$ 131,143	\$ 130,617		\$ 133,535	102%	
Other Network	436,310	461,684	451,685	442,038		446,492	101%	
<b>Intertie</b>	73,891	78,630	76,368	76,949		76,257	99%	
Other Direct Sales	263,312	270,592	263,557	265,520		265,824	100%	
<b>Miscellaneous Revenues</b>	44,033	39,154	42,431	43,262		41,491	96%	
<b>Inter-Business Unit Revenues</b>	114,459	117,591	112,403	121,945		128,126	105%	
<b>Total Operating Revenues</b>	<b>1,061,700</b>	<b>1,100,742</b>	<b>1,077,587</b>	<b>1,080,330</b>		<b>1,091,725</b>	<b>101%</b>	
<b>Operating Expenses</b>								
<b>Transmission Operations</b>								
<b>System Operations</b>								
INFORMATION TECHNOLOGY	9,436	10,558	7,298	10,701		9,903	93%	
POWER SYSTEM DISPATCHING	13,913	13,671	12,895	13,945		13,722	98%	
CONTROL CENTER SUPPORT	23,066	18,757	25,178	25,009		23,567	94%	
TECHNICAL OPERATIONS <Note 2	7,750	6,983	14,168	9,979		8,029	80%	
STRATEGIC INTEGRATION	2,414	7,555	1,607	2,118		2,028	96%	
SUBSTATION OPERATIONS	23,572	21,817	24,507	24,081		23,444	97%	
<b>Sub-Total</b>	<b>80,151</b>	<b>79,341</b>	<b>85,653</b>	<b>85,833</b>		<b>80,693</b>	<b>94%</b>	
<b>Scheduling</b>								
RESERVATIONS	1,167	1,383	1,227	1,044		1,211	116%	
PRE-SCHEDULING	382	276	284	284		211	74%	
REAL-TIME SCHEDULING	4,739	5,169	5,789	4,929		5,062	103%	
SCHEDULING TECHNICAL SUPPORT	3,641	4,259	4,751	4,182		3,656	87%	
SCHEDULING AFTER-THE-FACT	273	289	277	277		305	110%	
<b>Sub-Total</b>	<b>10,202</b>	<b>11,376</b>	<b>12,328</b>	<b>10,716</b>		<b>10,445</b>	<b>97%</b>	
<b>Marketing and Business Support</b>								
TRANSMISSION SALES	2,299	2,775	2,834	2,621		2,524	96%	
MKTG TRANSMISSION FINANCE	-	-	-	-		-	0%	
MKTG CONTRACT MANAGEMENT	4,453	4,984	4,946	4,660		4,465	96%	
MKTG TRANSMISSION BILLING	2,318	3,377	2,433	2,116		2,093	99%	
MKTG BUSINESS STRAT & ASSESS <Note 3	6,836	7,291	6,877	6,651		7,948	119%	
<b>Marketing Sub-Total</b>	<b>15,906</b>	<b>18,426</b>	<b>17,089</b>	<b>16,048</b>		<b>17,030</b>	<b>106%</b>	
EXECUTIVE AND ADMIN SERVICES	16,630	27,540	28,608	17,753		16,908	95%	
LEGAL SUPPORT	2,611	3,548	1,641	1,962		2,304	117%	
TRANS SERVICES INTERNAL GENERAL & ADMINISTRATIVE <Note 4	11,047	13,135	14,777	13,522		9,847	73%	
AIRCRAFT SERVICES	1,094	2,230	2,489	1,839		882	48%	
LOGISTICS SERVICES	6,685	4,488	4,354	5,151		5,861	114%	
SECURITY ENHANCEMENTS	889	716	561	561		547	98%	
<b>Business Support Sub-Total</b>	<b>38,957</b>	<b>51,657</b>	<b>52,432</b>	<b>40,789</b>		<b>36,350</b>	<b>89%</b>	
<b>Transmission Operations Sub-Total</b>	<b>\$ 145,216</b>	<b>\$ 160,800</b>	<b>\$ 167,501</b>	<b>\$ 153,386</b>		<b>\$ 144,518</b>	<b>94%</b>	

Pct of Dir & Indirects	Allocation of OH		
24.58%	\$ 28,752,841.45	Subtot Programs	\$ 328,336,340.61
		Subtot Overhead	\$ 116,994,457.86
		Total Costs	\$ 445,330,798.47
3.18%	\$ 3,721,649.27	\$ 3,655,912.96	Scheduling Indirects
		\$ 6,788,621.97	Scheduling Directs
		\$ 10,444,534.93	Scheduling Total
Included in row 44 (Marketing subtotal) below.			
3.78%	\$ 4,423,132.56	\$ 12,413,196.18	Subtot Contr & Rates
5.19%	\$ 6,068,365.79	\$ 17,030,422.24	Marketing
		\$ 27,474,957.17	Mktg + Scheduling

Report ID: 0061FY17

Run Date/Time: November 07, 2017 06:37

Requesting BL: TRANSMISSION BUSINESS UNIT

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% of Year Elapsed = 100%

	A	B		C		D <small>&lt;Note 1</small>	E	F
	FY 2016	FY 2017				FY 2017	FY 2017	
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast		
<b>Transmission Maintenance</b>								
<b>System Maintenance</b>								
35	NON-ELECTRIC MAINTENANCE	\$ 27,546	\$ 31,424	\$ 28,233	\$ 25,556	\$ 28,872	113%	
36	SUBSTATION MAINTENANCE	31,125	29,043	32,267	31,353	30,860	98%	
37	TRANSMISSION LINE MAINTENANCE	25,564	27,482	31,119	29,851	27,574	92%	
38	SYSTEM PROTECTION CONTROL MAINTENANCE	13,222	13,741	14,198	13,837	14,921	108%	
39	POWER SYSTEM CONTROL MAINTENANCE	19,095	18,507	19,706	20,706	21,589	104%	
40	JOINT COST MAINTENANCE	230	113	8	8	190	2242%	
41	SYSTEM MAINTENANCE MANAGEMENT	8,555	9,556	9,495	9,403	8,348	89%	
42	ROW MAINTENANCE	7,785	10,162	8,858	8,842	10,401	118%	
43	HEAVY MOBILE EQUIP MAINT	312	( )	( )	-	427	0%	
44	TECHNICAL TRAINING	2,719	2,418	2,735	2,735	2,796	102%	
45	VEGETATION MANAGEMENT	16,489	17,039	18,480	18,480	16,784	91%	
46	<b>Sub-Total</b>	<b>152,640</b>	<b>159,485</b>	<b>165,098</b>	<b>160,770</b>	<b>162,762</b>	<b>101%</b>	
<b>Environmental Operations</b>								
47	ENVIRONMENTAL ANALYSIS	6	-	-	-	6	0%	
48	POLLUTION PREVENTION AND ABATEMENT	4,808	4,787	4,726	4,121	4,161	101%	
49	<b>Sub-Total</b>	<b>4,815</b>	<b>4,787</b>	<b>4,726</b>	<b>4,121</b>	<b>4,166</b>	<b>101%</b>	
50	<b>Transmission Maintenance Sub-Total</b>	<b>157,455</b>	<b>164,272</b>	<b>169,824</b>	<b>164,891</b>	<b>166,929</b>	<b>101%</b>	
<b>Transmission Engineering</b>								
<b>System Development</b>								
51	RESEARCH & DEVELOPMENT	7,458	9,555	6,961	6,463	8,576	133%	
52	TSR PLANNING AND ANALYSIS	18,059	16,738	25,241	21,177	21,601	102%	
53	CAPITAL TO EXPENSE TRANSFER	8,951	4,351	4,211	4,227	6,896	163%	
54	NERC / WECC COMPLIANCE	14,052	20,422	17,585	16,241	12,684	78%	
55	ENVIRONMENTAL POLICY/PLANNING	1,251	1,642	1,633	1,708	1,192	70%	
56	ENG RATING AND COMPLIANCE	1,399	2,207	2,298	2,238	2,291	102%	
57	<b>Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
58	<b>Transmission Engineering Sub-Total</b>	<b>51,168</b>	<b>54,915</b>	<b>57,929</b>	<b>52,054</b>	<b>53,240</b>	<b>102%</b>	
<b>Trans. Services Transmission Acquisition and Ancillary Services</b>								
<b>BBL Acquisition and Ancillary Products and Services</b>								
59	ANCILLARY SERVICES PAYMENTS	103,366	101,027	103,653	102,661	102,947	100%	
60	OTHER PAYMENTS TO POWER SERVICES	9,393	9,617	9,395	9,394	9,407	100%	
61	STATION SERVICES PAYMENTS	2,595	2,785	2,704	2,704	2,639	98%	
62	<b>Sub-Total</b>	<b>115,354</b>	<b>113,429</b>	<b>115,752</b>	<b>114,759</b>	<b>114,993</b>	<b>100%</b>	
<b>Non-BBL Acquisition and Ancillary Products and Services</b>								
63	LEASED FACILITIES	7,533	7,447	6,849	6,849	6,128	89%	
64	GENERAL TRANSFER AGREEMENTS (SETTLEMENT)	1,344	18	2	2	198	8088%	
65	NON-BBL ANCILLARY SERVICES	4,932	18,560	18,865	13,117	11,850	90%	
66	OVERSUPPLY DISPLACEMENT COSTS	-	-	-	-	2,239	0%	
67	RELIABILITY DEMAND RESPONSE/REDISPATCH	46	1,328	5,155	6,277	5,506	88%	
68	<b>Sub-Total</b>	<b>13,856</b>	<b>27,353</b>	<b>30,872</b>	<b>26,246</b>	<b>25,921</b>	<b>99%</b>	
69	<b>Trans. Svcs. Acquisition and Ancillary Services Sub-Total</b>	<b>129,210</b>	<b>140,782</b>	<b>146,623</b>	<b>141,005</b>	<b>140,914</b>	<b>100%</b>	
<b>Transmission Reimbursables</b>								
<b>Reimbursables</b>								
70	EXTERNAL REIMBURSABLE SERVICES	13,624	8,615	8,802	8,802	14,459	164%	
71	INTERNAL REIMBURSABLE SERVICES	1,752	1,120	1,120	1,121	1,187	106%	
72	<b>Sub-Total</b>	<b>15,376</b>	<b>9,735</b>	<b>9,922</b>	<b>9,923</b>	<b>15,646</b>	<b>158%</b>	
73	<b>Transmission Reimbursables Sub-Total</b>	<b>\$ 15,376</b>	<b>\$ 9,735</b>	<b>\$ 9,922</b>	<b>\$ 9,923</b>	<b>\$ 15,646</b>	<b>158%</b>	

<p>TLM ROW VEG                  \$ 54,759,896                  SUB Maint                  \$ 30,860,406</p>	<p>50.84% \$ 59,480,947.02</p>	<p>16.22% \$ 18,970,654.33</p>	<p>8562030295.78% \$ 121,417,590.42 Total Allocation incl. Contr. &amp; Rates.                  8562030292.00% \$ 116,994,457.86 Total Allocations</p>
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<p>\$ 36,509,900.95 SPC+PSC                  \$ 11,570,907.11 Mtc. Indirects                  \$ 155,357,995.65 Dir Mtc less Indirects</p>
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Report ID: 0061FY17 Run Date/Time: November 07, 2017 06:37  
 Requesting BL: TRANSMISSION BUSINESS UNIT Data Source: EPM Data Warehouse  
 Unit of Measure: \$ Thousands % of Year Elapsed = 100%

	A	B	C	D <Note 1	E	F
	FY 2016	FY 2017			FY 2017	FY 2017
	Actuals	Rate Case	SOY Budget	Current EOY Forecast	Actuals	Actuals per Forecast
<b>BPA Internal Support</b>						
74 Additional Post-Retirement Contribution	\$ 16,440	\$ 19,748	\$ 17,023	\$ 14,672	\$ 13,920	95%
75 Agency Services G & A (excludes direct project support)	71,144	64,775	73,647	66,825	66,724	100%
76 <b>BPA Internal Support Subtotal</b>	<b>87,584</b>	<b>84,523</b>	<b>90,670</b>	<b>81,497</b>	<b>80,644</b>	<b>99%</b>
<b>Other Income, Expenses, and Adjustments</b>						
77 Bad Debt Expense	10	-	-	10	48	490%
78 Other Income, Expenses, Adjustments	(6,737)	-	-	245	(1,093)	-546%
79 Undistributed Reduction	-	(2,100)	(11,688)	-	-	0%
80 Depreciation	241,985	257,416	257,416	257,866	258,767	100%
81 Amortization	2,174	2,132	2,132	2,152	2,160	100%
82 <b>Total Operating Expenses</b>	<b>823,440</b>	<b>872,475</b>	<b>890,328</b>	<b>863,029</b>	<b>861,773</b>	<b>100%</b>
83 <b>Net Operating Revenues (Expenses)</b>	<b>238,260</b>	<b>228,267</b>	<b>187,259</b>	<b>217,302</b>	<b>229,952</b>	<b>106%</b>
<b>Interest Expense and (Income)</b>						
84 Federal Appropriation	14,059	8,954	8,628	8,628	8,628	100%
85 Capitalization Adjustment	(18,968)	(18,968)	(18,968)	(18,968)	(18,968)	100%
86 Borrowings from US Treasury	91,889	138,723	93,979	95,024	94,921	100%
87 Debt Service Reassignment	24,114	15,810	15,601	14,341	14,341	100%
88 Customer Advances	5,648	6,041	4,738	4,646	4,454	96%
89 Lease Financing	54,614	55,408	69,878	61,024	60,745	100%
90 AFUDC	(31,042)	(41,346)	(24,342)	(21,000)	(21,577)	103%
91 Interest Income	(3,957)	(16,310)	(3,875)	(3,093)	(3,045)	98%
92 <b>Net Interest Expense (Income)</b>	<b>136,358</b>	<b>148,313</b>	<b>145,640</b>	<b>140,601</b>	<b>139,499</b>	<b>99%</b>
93 <b>Total Expenses</b>	<b>959,798</b>	<b>1,020,788</b>	<b>1,035,968</b>	<b>1,003,630</b>	<b>1,001,272</b>	<b>100%</b>
94 <b>Net Revenues (Expenses)</b>	<b>\$ 101,902</b>	<b>\$ 79,954</b>	<b>\$ 41,619</b>	<b>\$ 76,700</b>	<b>\$ 90,453</b>	<b>118%</b>

- <1 Although the forecasts in this report are presented as point estimates, BPA operates a hydro-based system that encounters much uncertainty regarding water supply and wholesale market prices. These uncertainties, among other factors, may result in large range swings +/- impacting the final results in revenues, expenses, and cash reserves.
- <2 Technical Operations project reporting includes the 2017 KSI project Commercial Operations.
- <3 Marketing Business Strategy and Assessment project reporting includes the three 2017 KSI projects Long-term Finance and Rates, Asset Management and Business Information Systems.
- <4 Transmission Services Internal General & Administrative reporting includes the 2017 KSI project Safety and Occupational Health.

**FY 2017 Amended  
Operating Plan**

**Schedule B for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
Bonneville's total PSC maintenance cost from rate case	2	<u>\$32,248,588</u>	<u>\$32,248,588</u>	<u>0</u>
PSC maintenance functionalization factor (Line 1/Line2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$32,248,588</u>	<u>\$36,509,901</u>	<u>\$4,261,313</u>
MFU Allocation Factor (Schedule A, Line 3 rounded to two decimals)	5	<u>2.27%</u>	<u>2.27%</u>	
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$730,872</u>	<u>\$827,449</u>	<u>\$96,577</u>
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,328,761</u>	<u>\$1,230,696</u>	<u>(\$98,065)</u>
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,059,633</u>	<u>\$2,058,145</u>	<u>(\$1,488)</u>
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$153,648,714</u>	<u>\$155,357,996</u>	<u>\$1,709,282</u>
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.34%</u>	<u>1.32%</u>	
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$10,623,459</u>	<u>\$11,570,907</u>	<u>\$947,448</u>
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$142,406</u>	<u>\$153,289</u>	<u>\$10,883</u>
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$70,646,056</u>	<u>\$59,480,947</u>	<u>(\$11,165,109)</u>
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$946,997</u>	<u>\$787,989</u>	<u>(\$159,008)</u>
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,149,036</u></b>	<b><u>\$2,999,423</u></b>	<b><u>(\$149,613)</u></b>

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**Capacity Ownership Agreement**  
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**Schedule C Table of Contents**

This revision is to: 1) update the former Estimated Energization Date column to read "Work Order Completion Date"; 2) add in a work order status column; 3) update for work orders added (see red font and "Billed"; 4) update for work orders cancelled (see red font and "CANCELLED"); 5) updated work order completion dates; 6) update for work orders BILLED or COMPLETE (see red font); 7) renumbered page numbers (see red font); 8) key and notes added on page 7.

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Work Order Completion Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00248443	Install a New Shunt Reactor	Alvey Substation	07/11/17	6	COMPLETE
00317553	Substation Control Battery & Charger Replacement	Buckley Substation	10/21/14	7	BILLED
<del>00317616</del>	<del>Replace Sequential Event Recorder and SCADA with a single large combined SER/SCADA unit (redundant)</del>	<del>Summer Lake Substation</del>	<del>09/15/16</del>	8	CANCELLED
00319051	Replace Interchange Metering	Malin Substation	11/13/14	9	BILLED
00321639	Ground Wire Replacement	Buckley-Marion No. 1	08/03/15	10	BILLED
00322001	Replace Relays; Malin-Grizzly #2; Malin-Capt. Jack #1	Malin Substation	08/26/14	11	BILLED
00322031	Replace 500 kV Line Relays & Transfer Trip for the Malin 500 kV line	Captain Jack Substation	10/09/14	12	BILLED
00322111	Replace 500 kV relays on John Day- Grizzly #1 & #2 lines with new current 500 kV relay packages, & replace TT Relays	John Day Substation	10/09/14	13	BILLED
00329379	Access Road Improvements	Marion-Alvey No. 1	05/09/17	14	COMPLETE
00335841	Standalone Access Road: 10 miles (Related to 45 mile span of transmission line)	Marion-Alvey No. 1	11/15/17	15	COMPLETE
00339242 was WO TBD Alvey 02	Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line	Alvey Substation	08/30/17	16	COMPLETE
00339354	Replace Remedial Action Scheme and Transfer Trip	Marion Substation	04/29/16	17	BILLED
00340156	Transfer Trip Replacement	Marion Substation	06/02/17	18	COMPLETE
00342131	Repair and upgrade drainage, yard rock, and grounding systems	Malin Substation	08/11/15	19	BILLED
<del>00344804</del>	<del>Replace Key Telephonic System</del>	<del>Captain Jack Substation</del>		<del>20</del>	CANCELLED
<del>00347243</del>	<del>Install Bird Dung Deflectors</del>	<del>Ashe-Marion No. 2</del>		<del>21</del>	CANCELLED
<del>00347998</del>	<del>Land acquisition for access road improvement near tower 142/1</del>	<del>Ashe-Marion No. 2</del>	<del>12/30/16</del>	<del>22</del>	CANCELLED
00348163	Land Rights Acquisition for Access Road, Structure 156/1	Grizzly-Captain Jack No. 1	09/30/17	23	COMPLETE
00349129	DC Control Cable Replacement	Malin Substation	12/30/15	24	BILLED
00351723 was WO TBD Malin 2	Replace Station Service Engine Generator	Malin Substation	10/28/15	25	BILLED
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	26	ACTIVE

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Work Order	Project Short Description	Facility	Work Order Completion Date	Page Number	Work Order Status
<del>00355443</del>	<del>Repair/replace concrete footings/foundations throughout yard (Bank #1)</del>	<del>Sycan Compensation Station</del>		27	CANCELLED
00356246	Replace Analog Transfer Trip (TT) Equipment	Grizzly Substation	01/30/17	28	BILLED
<del>00358697</del>	<del>Analog TT</del>	<del>Malin Substation</del>	<del>09/20/17</del>	<del>29</del>	<del>CANCELLED</del>
00375811	Replace Station Battery	Fort Rock Compensation Station	02/29/16	30	BILLED
<del>00379512</del>	<del>Land Rights Acquisition for Access Road</del>	<del>Malin Substation</del>	<del>06/09/17</del>	<del>31</del>	<del>CANCELLED</del>
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	32	COMPLETE
00396368	Replace Meters	Alvey Substation	10/15/15	33	BILLED
00401519	Station Service Cable Replacement	John Day Substation	04/29/16	34	BILLED
00404279	Emergency Replacement of Transfer Switch - Bank No. 1	Fort Rock Compensation Station	12/22/16	35	BILLED
00423702 was TBD Sycan 01	Replace Station Battery	Sycan Compensation Station		36	
<del>TBD Alvey-Dixonville 01</del>	<del>Miscellaneous Right of Way Capital Repairs (PAC Project)</del>	<del>Alvey-Dixonville</del>	01/01/20	<del>37</del>	<del>ACTIVE</del>
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	38	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	12/15/16	39	Project (PAC)
TBD Dixonville-Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	40	Project (PAC)
TBD Malin 13	Relay Replacement on the Round Mt. No 1 line	Malin Substation		41	<i>To be cancelled</i>
TBD Malin 14	Relay Replacement on the Round Mt. No 2 line	Malin Substation		42	<i>To be cancelled</i>
TBD Sand Springs 04	Replace Station Battery	Sand Springs Compensation Station	11/30/21	43	Project (BPA)
<del>TBD Summer Lake 03</del>	<del>Work on BPA Relays on the Grizzly line</del>	<del>Summer Lake Substation</del>		44	CANCELLED
TBD Sycan 02	Station Service Engine Generator Upgrade	Sycan Compensation Station		45	Project (BPA)
TBD Sycan 03	Station Service Engine Generator Upgrade	Sycan Compensation Station		46	Project (BPA)

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Exhibit I Page 6  
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*Below is information about work orders added or removed, acronyms and further information.*

<b>Work Order Number(s) ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>
00248443	This July 23, 2018 notice letter	6
00329379	This July 23, 2018 notice letter	14
00356246	February 12, 2018 billing notice letter, see Note 1	28

<b>Work Order Number(s) REMOVED or to be REMOVED</b>	<b>Correspondence Notes</b>	<b>Page Number</b>
00317616	2/16/2017	8
00344804	4/25/2016	20
00347243	3/1/2016	21
00347998	5/1/2017	22
00355443	3/1/2016	27
00358697	February 12, 2018 billing notice letter, see Note 1	29
00379512	2/9/2016	31
TBD Alv Dix 01	10/7/2016, see Note 2	37
TBD Malin 13	(See future billing notice letter for cancellation reason)	41
TBD Malin 14	(See future billing notice letter for cancellation reason)	42
TBD Summer Lake 03	(See future billing notice letter for cancellation reason)	44

**Note 1:** For Exhibit I Schedule Cs billed, please refer to the letter previously provided per date stated above.

**Note 2:** The status of TBD Alvey Dix 01 project is determined each individual fiscal year. For FY 2017, the TBD Alvey Dix 01 has been removed from this FY 2017 operating plan.

**Key:**

Project (BPA) Work Order Status is for BPA project information prior to BPA Active (or Pending) work order status or prior to establishing a BPA work order number

Project (PAC) Work Order Status is for project information provided to BPA in April 2017 and June 2018 prior to establishing a BPA work order number

**FY 2017 Schedule C**

**Project Work Order:** 00248443  
**Project Short Description:** Install a New Shunt Reactor  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 2/24/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$9,939,138				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$4,969,569				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,618,206				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$17,526,913				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00329379  
**Project Short Description:** Access Road Improvements  
**Project Facility:** Marion-Alvey No. 1  
**Exhibit F Section:** A.11. Marion-Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 12/15/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$728,732				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$364,366				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$126,402				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,219,500				

**Notes:**

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- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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**CAPACITY OWNERSHIP AGREEMENT  
FY2017 OPERATING PLAN**

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**Schedule D for FY 2017**

	Line No.	Allocated Actual	Allocated Forecast
<b>IV. General Plant Cost</b>			
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>\$1,260,992,898</u>	<u>\$1,066,479,917</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>\$128,920,000</u>	<u>\$128,920,000</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>\$262,279,000</u>	<u>\$262,279,000</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>\$1,435,350</u>	<u>\$1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>\$1,126,198,548</u>	<u>\$931,685,567</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>\$62,692,114</u>	<u>\$49,594,573</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>\$7,866,227,461</u>	<u>\$7,866,227,461</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 Calculation rounded to two decimals)	9	<u>0.80%</u>	<u>0.63%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>\$408,322,489</u>	<u>\$394,540,336</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	11	<u><u>\$3,266,580</u></u>	<u><u>\$2,485,604</u></u>

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**FY 2017 Schedule C**

**Project Work Order:** 00339242  
**Project Short Description:** Replace Remedial Action Scheme, Transfer Trip Equipment and Line Loss Relays on the Dixonville 500 kV line  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2017  
**Status:** COMPLETE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,222,998				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$611,499				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$182,585				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,017,082				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
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- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C has had the 50% PacifiCorp costs removed from this work order.
- 5/ The costs in the Line #1 are from PacifiCorp information provided April 2017 to BPA.

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CAPACITY OWNERSHIP AGREEMENT  
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 SCHEDULE D-1 WORKSHEET

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<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,420	0.0642	56,459
Buildings	<u>262,128,864</u>	0.0178	<u>4,665,894</u>
	<u>263,008,284</u>		<u>4,722,353</u>
M.W./Hydr/Radio/Comm	686,359,076	0.0600	41,181,545
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,168,694	0.1327	5,861,186
Software	59,164,104	0.1710	10,117,062
Transportation	60,493,993	0.0333	2,014,450
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,836,541	0.0410	567,298
Laboratory Equipment	30,935,963	0.0688	2,128,394
Power Operated Equipment	30,234,379	0.0540	1,632,656
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
<b>Total General Plant</b>	<b><u>1,260,992,898</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>72,624,248</u></b>


<sup>1</sup> Source: Summary Utility for the period ending 9/30/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

This information is being released externally by BPA on 7/24/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 9/30/2016	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 9/30/2017	
<b>General Plant</b>							
T	LAND-GENERAL PLANT	3890	667,022	212,399	0	0	879,420
T	STRUCTURES/IMPROVEMENTS	3900	257,771,240	4,357,624	0	0	262,128,864
T	OFFICE FURNITURE	3911	1,729,500	0	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	37,844,323	8,272,935	1,948,564	0	44,168,694
T	SOFTWARE	3913	54,226,141	16,650,835	11,712,872	0	59,164,104
T	ROLLING STOCK	3921	56,037,627	5,182,593	726,227	0	60,493,993
T	HELICOPTERS	3922	9,234,320	0	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,728,800	80,293	0	0	3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	11,429,857	2,406,684	0	0	13,836,541
T	LABORATORY EQUIP (PORT)	3950	27,776,612	3,326,336	166,986	0	30,935,963
T	POWER OPERATED EQUIP	3960	28,927,623	1,953,872	647,115	0	30,234,379
T	COMMUNICATION EQUIP-PORT	3970	661,795,904	39,145,361	14,445,862	(136,326.73)	686,359,076
T	MISC EQUIP	3980	46,923,431	3,476,423	1,037,210	0	49,362,645
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>			1,260,992,898

To D-1  


Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility  
 For the period ending September 30, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 7/24/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	128,920,000	0.0218	2,810,456
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(128,920,000)	0.0218	(2,810,456)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(13,103,000)	0.1327	(1,738,768)
FERC 391.3	(8,035,000)	0.1710	(1,373,985)
FERC 392.3	0	0.0630	0
FERC 397	<u>(112,221,000)</u>	0.0600	<u>(6,733,260)</u>
<i>[Equals amount on Schedule D-4A]</i>	<u>(262,279,000)</u>		<u>(12,656,469)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(134,794,350)		(9,932,134)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,260,992,898</u>		<u>72,624,248</u>
Schedule D Total General Plant	<u>1,126,198,548</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>62,692,114</b>

*[To Schedule D, Line 7]*

This is based on the depreciation study that was completed February 2012 and was effective March 2012. This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)

Totals by Year	FERC ACCOUNT					2014	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				
Total Plant-in-Service	77,904	13,103	5,074	51,272	147,353	90,655	13,103	6,288	74,788	184,834	104,953	13,103	7,709	105,245	231,010	128,920	13,103	8,035	112,221	262,279				

ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)

Additions included in above totals by year	FERC ACCOUNT					2015	FERC ACCOUNT					2016	FERC ACCOUNT					2017
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			
Total Additions	12,751	0	1,214	23,516	37,481	14,298	0	1,421	30,457	46,176	23,967	0	326	6,976	31,269			

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 52  
 Prepared Date 7/24/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>FERC ACCT</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2015 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2016 TOTAL</b>	<b>ANCILL SERV</b>	<b>TRANS</b>	<b>2017 TOTAL</b>
1 LAND & LAND RIGHTS	389	0	11,920	11,920		20,866	20,866		29,758	29,758
2 STRUCTURES & IMPROVEMENTS	390	0	245,923	245,923		310,421	310,421		350,278	350,278
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,696	1,696		1,696	1,696		1,696	1,696
4 DATA PROCESSING -EQUIPMENT	391.2	13,103	556	13,659	13,103	556	13,659	13,103	556	13,659
5 DATA PROCESSING -SOFTWARE	391.3	6,288	37,795	44,083	7,709	44,478	52,187	8,035	50,662	58,697
6 TRANSPORT EQUIPMENT	392.1	0	62,309	62,309		67,925	67,925		74,040	74,040
7 HELICOPTERS	392.2	0	9,234	9,234		9,234	9,234		9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656		8,656	8,656		8,656	8,656
9 STORES EQUIPMENT	393	0	3,006	3,006		3,006	3,006		3,006	3,006
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	14,107	14,107		17,872	17,872		21,821	21,821
11 LAB EQUIPMENT	395	0	25,593	25,593		25,593	25,593		25,593	25,593
12 POWER OPERATED EQUIPMENT	396	0	27,832	27,832		27,832	27,832		27,832	27,832
13 COMMUNICATIONS EQUIPMENT	397	74,788	470,998	545,786	105,245	489,815	595,060	112,221	525,461	637,682
14 MISC EQUIPMENT	398	0	39,554	39,554		39,554	39,554		39,554	39,554
15 SUBTOTAL GENERAL PLANT		94,179	959,178	1,053,357	126,057	1,067,503	1,193,560	133,359	1,168,146	1,301,505
16 STATION EQUIPMENT	353	90,655	0	90,655	104,953	0	104,953	128,920	0	128,920
17 TOTAL GENERAL PLANT		184,834	959,178	1,144,012	231,010	1,067,503	1,298,513	262,279	1,168,146	1,430,425



[To Schedule D, Line 3]

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville- PP&L Total	0		
Meridian-PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2017 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2014 INVEST</b>	<b>2015 ADDITIONS</b>	<b>TOTAL 2015 INVEST</b>	<b>2016 ADDITIONS</b>	<b>TOTAL 2016 INVEST</b>	<b>2017 ADDITIONS</b>	<b>TOTAL 2017 INVEST</b>
GENERATION-INTEGRATION	99,827	0	99,827	0	99,827	0	99,827
NETWORK	5,389,747	308,870	5,698,618	394,218	6,092,835	285,745	6,378,581
SOUTHERN INERTIE	835,569	26,007	861,576	23,091	884,667	294,633	1,179,300
EASTERN INERTIE	118,197	189	118,386	83	118,469	79	118,548
UTILITY DELIVERY	11,475	49	11,524	58	11,582	41	11,623
DSI DELIVERY	10,333	0	10,333	0	10,333	0	10,333
REGULATORY ASSET	56,083	655	56,738	771	57,509	949	58,458
INTANGIBLE PLANT	9,559		9,559	0	9,559	0	9,559
ANCILLARY SERVICES	147,353	37,481	184,833	46,176	231,009	31,269	262,278
GENERAL PLANT	944,193	122,773	1,066,967	125,322	1,192,288	113,762	1,306,050
TOTAL BPA	7,622,335	496,024	8,118,359	589,718	8,708,077	726,479	9,434,556
GENERAL PLANT/ANC SERV	(1,091,546)		(1,251,800)		(1,423,297)		(1,568,329)
TOTAL LESS GP/ANC SERV	6,530,789		6,866,559		7,284,780		7,866,227

*[To Schedule D, Line 8]*

From BP-16 Final Proposal provided by M. (Gestrin) McGraw 4/30/18

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**SUBSTATION INVESTMENT (\$)**  
**As of May 06, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)**  
**As of May 09, 2018**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A

Updated 06/26/2018 by Andrew Loescher

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

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## FY 2017 Amended Operating Plan

### Schedule E for FY 2017

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and Related Costs</b>	1	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>
<b>B. Other PNW AC Intertie Costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$146,212</u>	<u>\$205,987</u>	<u>\$59,775</u>

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## FY 2017 Amended Operating Plan

### Schedule F for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Total contracts and rates cost from rate case	2	<u>\$12,274,289</u>	<u>\$12,274,289</u>	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$12,274,289</u>	<u>\$12,413,196</u>	<u>\$138,907</u>
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$5,278,618</u>	<u>\$4,423,133</u>	<u>-\$855,485</u>
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$17,552,907</u>	<u>\$16,836,329</u>	<u>-\$716,578</u>
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<u><b>\$397,813.51</b></u>	<u><b>\$381,573.21</b></u>	<u><b>(\$16,240.30)</b></u>

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## FY 2017 Amended Operating Plan

### Schedule G for FY 2017

	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling costs from rate case	1	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
Total <b>transmission</b> scheduling cost from rate case	2	<u>\$11,375,812</u>	<u>\$11,375,812</u>	<u>0</u>
<b>Transmission</b> scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	<u>100.00%</u>	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3 rounded to two decimals)	4	<u>2.27%</u>	<u>2.27%</u>	
<b>C. Total Transmission Scheduling Costs</b>				
<b>Transmission</b> scheduling direct costs	5	<u>\$7,116,689</u>	<u>\$6,788,622</u>	<u>-\$328,067</u>
<b>Transmission</b> scheduling indirect costs	6	<u>\$4,259,123</u>	<u>\$3,655,913</u>	<u>-\$603,210</u>
<b>Transmission</b> scheduling overhead costs	7	<u>\$4,892,224</u>	<u>\$3,721,649</u>	<u>-\$1,170,575</u>
Bonneville's total <b>transmission</b> scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,268,036</u>	<u>\$14,166,184</u>	<u>-\$2,101,852</u>
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	9	<u>\$368,694</u>	<u>\$321,058</u>	<u>(\$47,636)</u>

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**FY 2017 Amended  
Operating Plan**

**Schedule H for FY 2017**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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**FY 2020  
Operating Plan  
EXHIBIT I**

**FY 2020 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$3,134,996	Operations
B	\$3,474,466	Maintenance
C	\$0	Replacements & Reinforcements
D	\$3,021,586	General Plant
E	\$215,625	Other (PacifiCorp)
F	\$316,992	Contracts & Rates
G	\$351,026	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,514,691</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,514,691 / 3450 MW/ 12 Months = \$253.98 /MW-month

Rounded to \$254 for whole-dollar billing

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2020  
Operating Plan**

**Schedule A for FY 2020***Data taken from the BP-18 Rate Case*

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$100,314,727		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$100,314,727		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$88,422,021		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$2,003,969		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$11,892,706		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$269,533		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$38,012,116		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$861,495		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$3,134,996</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Schedule B for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	\$40,975,439	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	\$40,975,439	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	100.00%	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	\$40,975,439	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	2.27%	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	\$928,654	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	\$1,431,906	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	\$2,360,560	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	\$163,326,808	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	1.45%	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	\$11,009,818	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	\$159,125	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	\$66,061,129	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	\$954,781	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b>\$3,474,466</b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**Capacity Ownership Agreement  
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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	8
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	9
00355355	Upgrade Station Service	Chief Joseph Substation	08/30/19	10
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	11
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	08/28/20	12
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	13
00381549	Replace Breaker Failure Relays	Slatt Substation	09/30/19	14
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	15
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	16
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	11/15/19	17
00420153	Replace Potential Transformers	Chief Joseph Substation	12/31/18	18
00423657 was TBD Sycan 01	Upgrading Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	09/15/18	19
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	20
00423702 was TBD Sycan 02,03,04	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/11/20	21
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	11/15/19	22
00455995 was TBD Malin 03	Security Enhancement	Malin Substation	08/30/19	23
00460709	Replace Microwave Transfer Trip Relays	Grizzly Substation	12/02/19	24

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Prepared Date: 9/28/18

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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
00466505	Ground Wire Replacement	Ashe-Marion No. 2	09/01/21	25
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays (BPA Project)	Alvey Substation	09/30/19	26
TBD Alvey 12	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	09/01/19	27
TBD Alvey 13	Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)	Alvey Substation	05/31/22	28
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	29
TBD Dixonville 03	Relay Replacement on Alvey Line (PAC Project)	Dixonville Substation	12/15/16	30
TBD Dixonville 04	Replace Series Capacitor Controls (PAC Project)	Dixonville Substation	12/15/16	31
TBD Dixonville-Meridian 02	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	32
TBD Grizzly 02	Replace SCADA/Sequential Event Recorder (BPA Project)	Grizzly Substation	TBD	33
TBD Malin 18	Replace Sequential Event Recorder (BPA Project)	Malin Substation	05/31/21	34
TBD Malin 19	Replace Power Circuit Breaker (BPA Project)	Malin Substation	TBD	35
TBD Malin 20	Updated Timing Clock (BPA Project)	Malin Substation	TBD	36
TBD Malin 22	Malin Fixed Series Capacitor control replacement (BPA Project)	Malin Substation	09/01/21	37
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	38
TBD Meridian 07	Replacement of Remote Terminal Unit (PAC Project)	Meridian Substation	TBD	39

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 Prepared Date: 9/28/18

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>
TBD Sand Springs 02	Station Service Engine Generator Upgrade (BPA Project)	Sand Springs Compensation Station	TBD	40
TBD Sand Springs 04	Replace Station Battery (BPA Project)	Sand Springs Compensation Station	11/30/21	41
TBD Sand Springs 05	Replace Fiber Optic Alarm Repeater (BPA Project)	Sand Springs Compensation Station	TBD	42
TBD Summer Lake 05	Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)	Summer Lake Substation	09/01/24	43

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*Below is information about work orders added or removed, acronyms and further information.*

*NOTE: Tables on this page are intentionally blank, and will be updated when this operating plan is amended.*

<b>Work Order Numbers ADDED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

<b>Work Order Numbers REMOVED</b>	<b>Date of Correspondence</b>	<b>Page Number</b>

**Note 1:** The status of TBD Alvey-Dixonville 01 project is determined for each individual fiscal year.

**Note 2:** The status of TBD Dixonville-Meridian 02 project is determined for each individual fiscal year.

**Key:**

BPA Project Work Order Status is for BPA project information prior to BPA Active (or Pending) Work Order status or prior to establishing a BPA Work Order number.



**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)  
  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper Work Orders.
- 5/ For this Work Order only a portion of the line applies: 99.34 miles for Buckley-Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Ownership Agreement, the costs for this Work Order are such that the BPA costs are 25% of this Work Order.

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Project Work Order: 00335885  
 Project Short Description: Land Rights Acquisition for Access Road, Structure 152/2  
 Project Facility: Ashe-Marion No. 2  
 Exhibit F Section: A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

Percent of Project cost applied to PNW AC Intertie: 25%  
 Estimated Energization Date: 11/15/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,675,488				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$837,744				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$329,788				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,843,020				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.7. Fort Rock 500 kV Compensation Station)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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Project Work Order: 00367753  
 Project Short Description: Ground Wire Replacement  
 Project Facility: John Day-Grizzly No. 1  
 Exhibit F Section: A.9. John Day-Grizzly No. 1 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/28/2020  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$114,896				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$918,328				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00381549  
 Project Short Description: Replace Breaker Failure Relays  
 Project Facility: Slatt Substation  
 Exhibit F Section: B.14. Slatt 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 9/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$386,672				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$193,336				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$580,008				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.14. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.4. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,811,734				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$905,867				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$225,459				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,943,060				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100% and please reference Exhibit F, Station General, in Section B.4.

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**FY 2020 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.9. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$14,783				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$185,951				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.5. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,443				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$388,635				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will be prorated to reflect that at Chief Joseph Sub, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2020 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/15/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$426,054				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$8,987,486				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The August 17, 2018 email regarding billing stated TBD Sycan 1 was combined into Work Order #00423702. It should have stated "Combined into Work Order #00423657".

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**FY 2020 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.15. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/11/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$113,431	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,278,401	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this Work Order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2020 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.10. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,951				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$50,447				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: 00455995  
 Project Short Description: Security Enhancement  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to  
 PNW AC Intertie: 100%  
 Estimated Energization Date: 8/30/2019  
 Status: ACTIVE  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,953,008				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,976,504				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,929,512				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** 00460709  
**Project Short Description:** Replace MWTT Relays  
**Project Facility:** Grizzly Substation  
**Exhibit F Section:** B.8. Grizzly 500 kV  
**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 12/2/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$422,509				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$211,255				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,302				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$662,065				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Project Work Order:** 00466505  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.3. 500 kV Double Circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits (Str. No. 1/3 to Marion, 159 km)

**Percent of Project cost applied to PNW AC Intertie:**  
**Estimated Energization Date:** 9/1/2021  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,000,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,000,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$275,014				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,275,014				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.3. above, this Work Order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays (BPA Project)  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.1. Alvey 500 kV Switchyard  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$25,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

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Project Work Order: TBD Alvey 12  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2019  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,500,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,750,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$115,162				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,365,162				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey 13  
 Project Short Description: Alvey Site Renovation of Control House and/or Yard with possibility of Seismic Hardening of Facilities (BPA Project)  
 Project Facility: Alvey Substation  
 Exhibit F Section: B.1. Alvey 500 kV Switchyard  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2022  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$3,150,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,575,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$413,964				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$5,138,964				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Alvey Dixonville 01  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Alvey-Dixonville  
 Exhibit F Section: A.1. Alvey-Dixonville 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Work Order represents BPA's 50% cost share obligation for work performed by PAC.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 03  
**Project Short Description:** Relay Replacement on Alvey Line (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$241,789				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$241,789				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls (PAC Project)  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. Dixonville 500 kV Station (BPA/PacifiCorp)  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/15/2016  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>						
	5	\$971,500	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.
- 5/ In 2017, BPA contacted PacifiCorp to receive information about the increase in costs for this Work Order (WO) since 2013. This WO cost information will be updated once received.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.



**Project Work Order:** TBD Dixonville-Meridian 02  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Dixonville-Meridian  
**Exhibit F Section:** A.6. Dixonville-Meridian 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this Work Order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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Project Work Order: TBD Grizzly 02  
 Project Short Description: Replace SCADA/Sequential Event Recorder (BPA Project)  
 Project Facility: Grizzly Substation  
 Exhibit F Section: B.8. Grizzly 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$289,999				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$145,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$434,999				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 18  
 Project Short Description: Replace Sequential Event Recorder (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 5/31/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,300,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$650,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3					
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,950,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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Project Work Order: TBD Malin 19  
 Project Short Description: Replace Power Circuit Breaker (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 20  
 Project Short Description: Updated Timing Clock (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$7,150				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$3,575				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$10,725				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Malin 22  
 Project Short Description: Malin Fixed Series Capacitor control replacement (BPA Project)  
 Project Facility: Malin Substation  
 Exhibit F Section: B.10. Malin 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$2,400,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1,200,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$243,976				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$3,843,976				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Meridian 06  
 Project Short Description: Replace 500 kV Series Cap Control (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 5/1/2018  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this Work Order. These forecasted costs were provided by PacifiCorp on April 28, 2017.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Meridian 07  
 Project Short Description: Replacement of Remote Terminal Unit (PAC Project)  
 Project Facility: Meridian Substation  
 Exhibit F Section: B.12. Meridian 500 kV Yard (BPA/PacifiCorp)  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$240,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$120,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$360,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2020 Schedule C**

**Project Work Order:** TBD Sand Springs 02  
**Project Short Description:** Station Service Engine Generator Upgrade (BPA Project)  
**Project Facility:** Sand Springs Compensation Station  
**Exhibit F Section:** B.13. Sand Springs 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:**  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
	No.					
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,490,000	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$745,000	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,235,000	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The June 12, 2018 email containing the October 2017 meeting follow up notes presented a range of \$330k to \$1.49M costs for Station Service Engine Generators.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

Project Work Order: TBD Sand Springs 04  
 Project Short Description: Replace Station Battery (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 11/30/2021  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$88,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$44,000				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$132,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Sand Springs 05  
 Project Short Description: Replace Fiber Optic Alarm Repeater (BPA Project)  
 Project Facility: Sand Springs Compensation Station  
 Exhibit F Section: B.13. Sand Springs 500 kV Compensation Station  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date:  
 Status: Project (BPA)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$223,222				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$111,611				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$334,833				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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Project Work Order: TBD Summer Lake 05  
 Project Short Description: Summer Lake Substation Replace 500kV Concrete Switch Support (BPA Project)  
 Project Facility: Summer Lake Substation  
 Exhibit F Section: B.16. Summer Lake 500 kV  
 Percent of Project cost applied to PNW AC Intertie:  
 Estimated Energization Date: 9/1/2024  
 Status:  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$11,491,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$5,745,500				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,028,160				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$19,264,660				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for this Work Order. Each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided. Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Work Order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while this Work Order remains in "ACTIVE" status, the analysis is premature. Therefore, this percentage is subject to change.

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**Schedule D for FY 2020**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,297,309,592</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>156,057,269</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>293,540,121</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,158,391,389</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>66,140,154</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,906,981,514</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.74%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>408,322,489</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$3,021,586</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 45  
 Prepared Date 9/28/2018

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	895,725	0.0684	61,268
Buildings	<u>286,736,310</u>	0.0195	<u>5,591,358</u>
	<u>287,632,035</u>		<u>5,652,626</u>
M.W./Hydr/Radio/Comm	700,133,961	0.0716	50,115,589
Office Furniture	1,729,500	0.0503	86,994
Data Processing	44,661,961	0.1755	7,838,174
Software	51,620,798	0.1502	7,753,444
Transportation	61,246,836	0.0367	2,247,759
Helicopter	9,234,320	0.0308	284,417
Airplane	8,656,306	0.0753	651,820
Stores Equipment	3,916,946	0.0343	134,351
Tools Shop Garage	14,860,259	0.0411	610,757
Laboratory Equipment	29,491,206	0.0789	2,326,856
Power Operated Equipment	30,831,336	0.0241	743,035
Miscellaneous	<u>53,294,126</u>	0.0667	<u>3,554,718</u>
Total General Plant	<b><u>1,297,309,592</u></b>	<i>[To Schedule D, Line 1]</i>	<b><u>82,000,540</u></b>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2018 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESOFT BEG. BALANCE 6/30/2018	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESOFT ENDING BALANCE 7/31/2018
<b>General Plant</b>						
T	LAND-GENERAL PLANT	3890	882,718	13,007	0	895,725
T	STRUCTURES/IMPROVEMENTS	3900	286,684,629	51,682	0	286,736,310
T	OFFICE FURNITURE	3911	1,729,500	0	0	1,729,500
T	DATA PROCESS EQUIPMENT	3912	45,149,135	0	487,174	44,661,961
T	SOFTWARE	3913	48,961,388	2,659,410	0	51,620,798
T	ROLLING STOCK	3921	60,995,052	251,785	0	61,246,836
T	HELICOPTERS	3922	9,234,320	0	0	9,234,320
T	AIRPLANES	3923	8,656,306	0	0	8,656,306
T	STORES EQUIPMENT	3930	3,916,946	0	0	3,916,946
T	TOOLS/SHOP/GARAGE EQUIP	3940	14,860,259	0	0	14,860,259
T	LABORATORY EQUIP (PORT)	3950	29,892,428	128,502	529,724	29,491,206
T	POWER OPERATED EQUIP	3960	30,831,336	0	0	30,831,336
T	COMMUNICATION EQUIP-PORT	3970	700,793,171	1,899,063	2,558,272	700,133,961
T	MISC EQUIP	3980	53,292,577	1,548	0	53,294,126
<b>Total General Plant</b>						<b>1,297,309,592</b>

↑ To D-1

*[To Schedule D, Line 1]*

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2018  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

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 Prepared Date 9/28/2018

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
Schedule D Adjustments			
additions:			
BPA Dittmer control equip investment (FERC 353)	156,057,269	0.0229	3,573,711
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(156,057,269)	0.0229	(3,573,711)
FERC 390	0	0.0195	0
FERC 391.1	0	0.0503	0
FERC 391.2	(33,256,461)	0.1755	(5,836,509)
FERC 391.3	(31,297,507)	0.1502	(4,700,885)
FERC 392.3	0	0.0753	0
FERC 397	(72,928,885)	0.0716	(5,220,250)
<i>[Equals amount on Schedule D-4A]</i>	<u>(293,540,121)</u>		<u>(19,331,355)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0716	<u>(102,742)</u>
<i>[From D-5]</i>			
Total adjustments	(138,918,202)		(15,860,386)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,297,309,592</u>		<u>82,000,540</u>
Schedule D Total General Plant	<u>1,158,391,389</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>66,140,154</b>

*[To Schedule D, Line 7]*

The Cap Recovery factors are based on the Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2016, pg VI-4. This depreciation study was completed February 2018 and was effective March 2018.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2018	FERC ACCOUNT					2019	FERC ACCOUNT					2020
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			
Total Plant-in-Service	104,094	33,256	28,592	66,852	232,795	133,489	33,256	30,131	69,909	266,786	156,057	33,256	31,298	72,929	293,540			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2019	FERC ACCOUNT					2020
	353	391.2	391.3	397	TOTAL		353	391.2	391.3	397	TOTAL	
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		
Total Additions	29,396	0	1,539	3,057	33,992	22,568	0	1,166	3,020	26,754		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

Exhibit I - Page 49  
 Prepared Date 9/28/2018

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC ACCT	ANCILL SERV	TRANS	2019 TOTAL	ANCILL SERV	TRANS	2020 TOTAL
1 LAND & LAND RIGHTS	389	0	28,283	28,283	0	35,005	35,005
2 STRUCTURES & IMPROVEMENTS	390	0	366,935	366,935	0	426,028	426,028
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,730	1,730	0	1,730	1,730
4 DATA PROCESSING -EQUIPMENT	391.2	33,256	10,912	44,169	33,256	10,912	44,169
5 DATA PROCESSING -SOFTWARE	391.3	30,131	32,398	62,529	31,298	33,652	64,949
6 TRANSPORT EQUIPMENT	392.1	0	70,562	70,562	0	75,037	75,037
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656
9 STORES EQUIPMENT	393	0	3,809	3,809	0	3,809	3,809
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	15,674	15,674	0	16,935	16,935
11 LAB EQUIPMENT	395	0	30,936	30,936	0	30,936	30,936
12 POWER OPERATED EQUIPMENT	396	0	30,234	30,234	0	30,234	30,234
13 COMMUNICATIONS EQUIPMENT	397	69,909	623,860	693,769	72,929	650,806	723,735
14 MISC EQUIPMENT	398	0	48,972	48,972	0	48,972	48,972
15 SUBTOTAL GENERAL PLANT		133,297	1,282,195	1,415,492	137,483	1,381,947	1,519,429
16 STATION EQUIPMENT	353	133,489	0	133,489	156,057	0	156,057
17 TOTAL GENERAL PLANT		266,786	1,282,195	1,548,981	293,540	1,381,947	1,675,487



[To Schedule D, Line 3]

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-5 WORKSHEET

Exhibit I - Page 50  
 Prepared Date 9/28/2018

**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<b>Budget Item</b>	<b>General Plant</b>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2020 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>	<b>2020 ADDITIONS</b>	<b>TOTAL 2020 INVEST</b>
GENERATION-INTEGRATION NETWORK	131,594	0	131,594	0	131,594
SOUTHERN INTERTIE	6,665,070	282,935	6,948,005	371,462	7,319,467
EASTERN INTERTIE	1,103,987	2,021	1,106,007	1,727	1,107,734
UTILITY DELIVERY	123,415	0	123,415	0	123,415
DSI DELIVERY	15,027	0	15,027	0	15,027
REGULATORY ASSET	8,583	0	8,583	0	8,583
INTANGIBLE PLANT	59,944	1,203	61,147	130,458	191,604
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	232,795	33,992	266,786	26,754	293,540
TOTAL BPA	<u>1,271,675</u>	<u>113,150</u>	<u>1,384,825</u>	<u>105,012</u>	<u>1,489,837</u>
GENERAL PLANT/ANC SERV	9,621,647	433,301	10,054,947	635,412	10,690,359
TOTAL LESS GP/ANC SERV	<u>(1,504,469)</u>		<u>(1,651,612)</u>		<u>(1,783,378)</u>
	<u>8,117,177</u>		<u>8,403,335</u>		<u>8,906,982</u>

*[To Schedule D, Line 8]*

From FY 2018 IPR Process; M. Gestrin 06/27/2018

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**SUBSTATION INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<b><u>ID #</u></b>	<b><u>Name</u></b>	<b><u>Investment</u></b>
10000656	ROUND MOUNTAIN SUBSTATION	65,046
10000121	CHIEF JOSEPH SUBSTATION	1,283,281
10000477	MARION SUBSTATION	3,493,420
10000776	SUMMER LAKE SUBSTATION	3,969,153
10000737	SLATT SUBSTATION	4,094,898
10000060	BUCKLEY SUBSTATION	6,512,717
10000019	ALVEY SUBSTATION	8,569,823
10000197	DIXONVILLE SUBSTATION	7,837,854
10000499	MERIDIAN SUBSTATION(PACIFICORP)	9,354,973
10000390	JOHN DAY SUBSTATION	13,538,980
10000784	SYCAN COMPENSATION STATION	16,203,749
10000269	FORT ROCK COMPENSATION STATION	17,681,028
10000713	SAND SPRING COMPENSATION STATION	18,401,359
10000033	BAKEOVEN COMPENSATION STATION	22,847,075
10000474	MALIN SUBSTATION	29,043,051
10000314	GRIZZLY SUBSTATION	33,620,708
10000162	CAPTAIN JACK SUBSTATION	42,644,102

Total	Southern AC Intertie	239,161,217
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*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of April 17, 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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**TRANSMISSION LINE INVESTMENT (\$)  
 SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Line</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1@ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50% <sup>1</sup>	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>2</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	6,046,722
20000372	Coyote Springs-Slatt No 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*3</sup>	328,108
Total Multi-Segment Lines		57,571,292
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>4</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>5</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>6</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	33,312,011
Total Southern AC Intertie		169,161,272

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by for BP-20 rate case Appendix A  
 Updated; A. Loescher 06/26/2018

<sup>1</sup> Also includes IDs# 20001337, 20001338 associated with leased costs for Buckley-Marion No. 1

<sup>2</sup> Also includes IDs# 20000911, 20000912, 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>3</sup> Also includes IDs# 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>4</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>5</sup> Also includes IDs # 20000908, 20000909, 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>6</sup> Also includes IDs # 20000924, 20000925, 20000926 associated with leased costs for John Day-Grizzly No. 2

<sup>\*</sup>The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No 1 and Slatt-John Day No 1 lines.

This information is being released externally by BPA on 9/28/2018 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule E for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>
<b>B. Other PNW AC Intertie costs</b>	2	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b>C. Total Other Costs</b>	3	<u>\$215,625</u>	<u>                    </u>	<u>                    </u>

This information is being released externally by BPA on 9/28/18 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**FY 2020  
Operating Plan**

**Schedule F for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,143,211</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,143,211</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,143,211</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,843,552</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$13,986,763</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$316,992</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
Operating Plan**

**Schedule G for FY 2020**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,232,258</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,232,258</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,309,638</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$3,922,620</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,256,224</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$15,488,482</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$351,026</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2020  
 Operating Plan**

**Schedule H for FY 2020**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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**PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT**

executed by the

**UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

acting by and through the

**BONNEVILLE POWER ADMINISTRATION**

and

**PUGET SOUND POWER & LIGHT COMPANY**

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- Exhibit A (CO-94, AC-93, IS-93 Rate Schedules and General Transmission Rate Schedule Provisions)
- Exhibit B (Annual Costs Rate)
- Exhibit C (Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share)
- Exhibit D (Lump Sum Payment Calculation)
- Exhibit E (Transmission Loss Factors)
- Exhibit F (Bonneville's PNW AC Intertie)
- Exhibit G (Capacity Owners)
- Exhibit H (Provisions Required by Statute or Executive Order)
- Exhibit I (Bonneville's PNW AC Intertie Costs)
- Exhibit J (Puget's Initial Transaction with California Utility)

This PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT (Agreement) is entered into as of October 11, 1994, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville or BPA) and PUGET SOUND POWER & LIGHT COMPANY (Puget), a corporation of the state of Washington. Each of Bonneville and Puget is sometimes referred to individually in this Agreement as "Party"; Bonneville and Puget are sometimes referred to together in this Agreement as "Parties."

WITNESSETH:

WHEREAS Bonneville, Portland General Electric Company (Portland), and PacifiCorp Electric Operations (PacifiCorp) planned and constructed improvements and additions to the Northwest portion of the PNW-PSW Intertie; and

WHEREAS such construction was completed in December 1993 resulting in 1600 MW of additional PNW AC Intertie Rated Transfer Capability in a north-to-

south direction and 1225 MW of additional PNW AC Intertie Rated Transfer Capability in a south-to-north direction; and

WHEREAS pursuant to the Northwest Intertie Agreements, Bonneville operates the PNW AC Intertie, in coordination with Portland and PacifiCorp, as a single system so as to maximize PNW AC Intertie Rated Transfer Capability and Operational Transfer Capability consistent with Prudent Utility Practice; and

WHEREAS Bonneville has developed a proposal to offer to PNW non-Federal scheduling utilities and joint agencies capacity ownership rights in 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability; and

WHEREAS such proposal has been studied in Bonneville's Final Non-Federal Participation Environmental Impact Statement, dated January 1994, and was the selected alternative in the Administrator's Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville and Puget executed a Memorandum of Understanding, DE-MS79-91BP93466, dated September 18, 1991, which, among other things, sets forth the principles for Puget's capacity ownership rights in Bonneville's PNW AC Intertie; and

WHEREAS interest expressed in capacity ownership by PNW non-Federal scheduling utilities and joint agencies exceeded the 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability offered by Bonneville, and as a result Bonneville developed and applied an allocation methodology selected in the Administrator's Capacity Ownership Record of Decision, dated March 25, 1994; and

WHEREAS concurrent with the execution of this Agreement, Bonneville and Puget are executing Contract No. DE-MS79-94BP93947 to provide Puget with, among other things, network wheeling between the John Day Substation and Puget's transmission system; and

WHEREAS Bonneville is authorized pursuant to law to dispose of electric power generated at various Federal hydroelectric projects in the PNW, or acquired from other resources, to construct and operate transmission facilities, to provide

transmission and other services, and to enter into agreements to carry out such authority;

NOW, THEREFORE, Bonneville and Puget agree as follows:

1. **DEFINITIONS**

- (a) "Adjusted Capacity Ownership Price" means the price calculated pursuant to column 2, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (b) "Adjusted Lump Sum Payment" means the Adjusted Capacity Ownership Price multiplied by Puget's Capacity Ownership Share (in kilowatts), as described with more particularity in section D of Exhibit D.
- (c) "Allocated Direct Costs" means for each fiscal year the Operations Cost as allocated to Bonneville's PNW AC Intertie in accordance with section I.C of Exhibit I for such fiscal year. Allocated Direct Costs are not included in Direct Costs, Indirect Costs, or Overhead Costs.
- (d) "Allowance for Funds Used During Construction" or "AFUDC" constitutes interest on the funds used for utility plant under construction. The AFUDC rate approximates the cost of money being used to finance current construction work in progress and is calculated in accordance with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors. AFUDC shall be capitalized in accordance with Bonneville's accounting procedures and practices, and in any event consistent with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors.
- (e) "Billing Provisions" means those provisions set forth in Exhibit B, Part B.

- (f) "Bonneville's PNW AC Intertie" means facilities of the PNW AC Intertie owned partially or entirely by Bonneville specified in Exhibit F together with the equipment and facilities installed in or connected to such facilities specified in Exhibit F, to the extent such facilities are necessary for the transmission of power on the PNW AC Intertie.
- (g) "Bonneville's PNW AC Intertie Operational Transfer Capability" means Bonneville's PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and by operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (h) "Bonneville's PNW AC Intertie Rated Transfer Capability" means Bonneville's share of the PNW AC Intertie Rated Transfer Capability as determined in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (i) "Capacity Owner" means each of the parties listed in Exhibit G to the extent that such party has entered into a Capacity Ownership Agreement.
- (j) "Capacity Ownership Agreement" means, in the singular, this Agreement or the agreement, substantially identical to this Agreement, entered into by each Capacity Owner (other than Puget) and Bonneville, and in the plural, this Agreement and all such substantially identical agreements entered into respectively by

Capacity Owners (other than Puget) and Bonneville, as each such agreement may be amended or supplemented from time to time pursuant to the terms of such agreement, concerning (among other things) the rights of such Capacity Owner with respect to the PNW AC Intertie.

- (k) "Capacity Ownership Percentage" means, as of the Effective Date, in the singular, the percentage of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Puget pursuant to this Agreement, which percentage is determined by dividing Puget's Capacity Ownership Share as of the Effective Date by Bonneville's PNW AC Intertie Rated Transfer Capability as of the Effective Date (such percentage being subject to change pursuant to the terms of this Agreement), and in the plural, the percentages of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which percentages are set forth in Exhibit G (each of such percentages being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (l) "Capacity Ownership Rights" means the rights of Puget pursuant to this Agreement.
- (m) "Capacity Ownership Share" means, except as such term is otherwise used in sections III.A and III.B of the CO-94 rate set forth in Exhibit A on the Effective Date, in the singular, the MW amount of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Puget pursuant to this Agreement, which MW amount is set forth in Exhibit C (such amount being subject to change pursuant to the terms of this Agreement), and in the plural, the MW amounts of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which amounts are set forth in Exhibit G (each of such amounts being subject to



change pursuant to the respective terms of such Capacity Ownership Agreements).

- (n) "Committee" has the meaning set forth in subsection 12(a).
- (o) "Contracts and Rates Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville's total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville's PNW AC Intertie.
- (p) "Direct Costs" means any costs incurred by Bonneville which are readily identifiable, or obviously traceable to, and directly benefit, a specific Bonneville program, project, or other cost objective. Direct Costs are not included in Allocated Direct Costs, Overhead Costs, or Indirect Costs. The methods for determining Direct Costs for Bonneville's PNW AC Intertie are set forth in sections II.B and III.A of Exhibit I.
- (q) "Effective Date" means the date as of which this Agreement becomes effective pursuant to section 2.
- (r) "End of Term Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.
- (s) "FERC" means the Federal Energy Regulatory Commission or its regulatory successor.
- (t) "General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The

method for determining General Plant Cost is set forth in section IV of Exhibit I.

- (u) "GTRSP" or "GTRSPs" means Bonneville's General Transmission Rate Schedule Provisions, set forth in Exhibit A, as such provisions may be revised from time to time.
- (v) "Indirect Costs" means any costs incurred by Bonneville which indirectly benefit and are directly charged to a specific Bonneville program, project, or other cost objective for which a Direct Cost or Allocated Direct Cost is charged. Indirect Costs shall not be included in Allocated Direct Costs, Direct Costs, or Overhead Costs. The methods for determining Indirect Costs for Bonneville's PNW AC Intertie are set forth in sections I.D, II.D, and III.B of Exhibit I.
- (w) "Initial Capacity Ownership Price" means \$215 per kilowatt, the calculation of which charge is set forth in column 1, section B of Exhibit D and in section III.A of the CO-94 rate in Exhibit A.
- (x) "Initial Lump Sum Payment" means the Initial Capacity Ownership Price multiplied by Puget's Capacity Ownership Share (in kilowatts), as described with more particularity in section C of Exhibit D.
- (y) "Interconnection Agreement" means the "Interim Interconnection Agreement Between Certain California-Oregon Transmission Project Participants and Northwest Participants," Contract No. DE-MS79-91BP93158, as amended or superseded.
- (z) "Joint AC Intertie" is as defined in the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (aa) "Joint Intertie Scheduling Office" or "JISO" means the group of Bonneville, Portland, and PacifiCorp schedulers, which, among other things, accepts PNW-PSW Intertie Preschedules.

- (bb) "Maintenance Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville's PNW AC Intertie, maintenance Indirect Costs for Bonneville's PNW AC Intertie, and maintenance Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.
- (cc) "MW" means megawatt.
- (dd) "Northwest Intertie Agreements" means the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (ee) "Operating Plan" means, subject to subsection 13(o), with respect to any fiscal year commencing on or after the day on which the annual costs rate set forth in Exhibit B has been approved on an interim or final basis by FERC, the written document containing the information described in subsection 13(c), as such document may be amended pursuant to section 13, 14, or 16.
- (ff) "Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.
- (gg) "Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

- (hh) "Overhead Cost" means administrative and general costs, support service costs, or other costs similar in nature which are distributed or allocated by Bonneville to Bonneville's PNW AC Intertie. Overhead Costs are not included in Direct Costs, Allocated Direct Costs, or Indirect Costs. The methods for determining Overhead Costs are set forth in sections I.E, II.E, and III.B of Exhibit I.
- (ii) "Pacific Northwest" or "PNW" means the area defined as the Pacific Northwest in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. section 839a(14).
- (ij) "Pacific Time" means Pacific Standard Time and Pacific Daylight Time as each is in force.
- (kk) "PNW AC Intertie" means facilities including, but not limited to, the following: two 500 kV transmission lines extending from John Day Substation to the Malin Substation and to the California-Oregon border; portions of John Day, Grizzly, and Malin Substations and the Sand Springs, Fort Rock, and Sycan Compensation Stations; a portion of the Buckley-Summer Lake 500 kV transmission line and associated substations; portions of the Buckley-Marion and Marion-Alvey 500 kV transmission lines and associated facilities; a portion of Bonneville's capacity rights in the Summer Lake-Malin 500 kV transmission line; Bonneville's rights in the Meridian-Malin 500 kV transmission line and Bonneville's share of ownership of the Alvey-Meridian 500 kV transmission line; Captain Jack Substation; the 500 kV transmission line from Captain Jack Substation to the California-Oregon border; and any modifications, additions, improvements, or other alterations thereto.
- (ll) "PNW AC Intertie Operational Transfer Capability" means the PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with

the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.

- (mm) "PNW AC Intertie Rated Transfer Capability" means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.
- (nn) "Pacific Northwest-Pacific Southwest Intertie" or "PNW-PSW Intertie" means the DC transmission line between the Celilo Converter Station in The Dalles, Oregon, and the Sylmar Converter Station near Los Angeles, California, the PNW AC Intertie, and the AC Intertie in California including, without limitation, the California-Oregon Transmission Project.
- (oo) "Pacific Northwest Non-Federal Utility" means any electric utility that serves retail load in the region consisting of (1) the states of Oregon, Washington, and Idaho, the portion of the state of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River Basin drainage basin, and (2) any contiguous areas, not in excess of seventy-five air miles from the area referred to in (1) above, which areas are a part of the service area of a rural electric cooperative power customer served by Bonneville on the effective date of the Pacific Northwest Power Planning and Conservation Act (P.L. 96-501) having a distribution system from which it serves both within and without such region.
- (pp) "Power Scheduling Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit

I to determine Power Scheduling Costs for Bonneville's PNW AC Intertie.

- (qq) "Preschedule" means the schedule submitted by Puget to the JISO pursuant to paragraph 4(b)(1) for transactions prepared each Working Day for the period beginning 2400 hours of the current Working Day through 2400 hours of the next Working Day.
- (rr) "Prudent Utility Practice" means, at any particular time, the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto that would achieve the desired result or, if there are no such practices, methods, and acts, the practices, methods, and acts which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to achieve the desired result consistent with reliability and safety.
- (ss) "Real-time Schedule" means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed by the JISO to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by Puget.
- (tt) "Reinforcement" means any transmission plant modification, addition, improvement, or other alteration to the Federal Columbia River Transmission System which is not a Replacement or an Upgrade and which is made pursuant to subsection 7(c).
- (uu) "Reinforcement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Puget for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on

account of such Reinforcement. Reinforcement Costs do not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

- (vv) "Replacement" means for any transmission plant addition, betterment, renewal and equipment or facility that takes the place of or adds to any existing equipment or facility on Bonneville's PNW AC Intertie that does not increase Bonneville's PNW AC Intertie Rated Transfer Capability.
- (ww) "Replacement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Puget for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Replacement. General Plant Cost is not included in Replacement Costs. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.
- (xx) "Revised Adjusted Capacity Ownership Price" means a price calculated pursuant to column 3, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (yy) "Revised Adjusted Lump Sum Payment" means a Revised Adjusted Capacity Ownership Price multiplied by Puget's Capacity Ownership Share (in kilowatts), as described with more particularity in section E of Exhibit D.
- (zz) "Scheduler" means the person authorized by a Party to accept or submit schedules pursuant to section 4 and authorized to implement,

interpret, and vary the scheduling procedures set forth in such section pursuant to this Agreement.

- (aaa) "Scheduling Percentage" means the percentage of the PNW AC Intertie Rated Transfer Capability owned by Puget pursuant to this Agreement, which percentage is determined by dividing Puget's Capacity Ownership Share by the PNW AC Intertie Rated Transfer Capability.
- (bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of Puget's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour.
- (ccc) "Scheduling Utility" means either (i) a Pacific Northwest Non-Federal Utility that serves a retail service area and operates a generation control area, or (ii) a Pacific Northwest Non-Federal Utility designated by Bonneville as a "computed requirements customer" or its equivalent.
- (ddd) "Term" means the period of effectiveness of this Agreement set forth in subsection 2(a).
- (eee) "Third AC Intertie" means the Third AC Intertie Project, which project increased the PNW AC Intertie Rated Transfer Capability by 1600 MW in a north-to-south direction and by 1225 MW in a south-to-north direction.
- (fff) "Third AC Intertie Project" means the Third AC Intertie System Reinforcement and the construction of the Alvey-Meridian 500 kV transmission line and of facilities related to such transmission line during the period from July 1984 through December 1993.
- (ggg) "Third AC Intertie System Reinforcement" means the improvements, additions and modifications to the PNW AC Intertie constructed during the period from July 1984 through December 1993 plus the construction of the Captain Jack substation and of facilities related to



such substation during the period from July 1984 through December 1993.

- (hhh) "Upgrade" means any MW increase to Bonneville's PNW AC Intertie Rated Transfer Capability which arises from or is related to an increase to the PNW AC Intertie Rated Transfer Capability.
- (iii) "Working Day" means any day other than Saturday, Sunday, and a legal holiday recognized by the Federal government or Puget.

## 2. TERM AND TERMINATION

- (a) This Agreement shall become effective as of the later of (1) the date of execution and delivery of this Agreement by both of the Parties, and (2) the date by which this Agreement has, with respect to Puget, been approved, accepted for filing or otherwise permitted to become effective by FERC; provided, that if FERC approves this Agreement for filing or otherwise permits this Agreement to become effective with any change or new condition, this Agreement shall not be or become effective unless both of the Parties have agreed in writing, and until the date by which both of the Parties have so agreed to such change or new condition. To the extent Puget is required to submit this Agreement to FERC, Puget shall submit this Agreement to FERC for approval no later than three Working Days after the date on which this Agreement is executed and delivered by both Parties. Bonneville shall provide Puget with a copy of the executed Agreement on the next Working Day after Bonneville executes the Agreement. Without limiting any of the foregoing, Puget shall use best efforts to obtain from FERC on the earliest possible date (following the date on which Puget is required to submit this Agreement to FERC pursuant to this subsection 2(a)) FERC's acceptance for filing or permission that this Agreement become effective in accordance with this subsection 2(a). This Agreement shall continue in effect so long as any facilities of the PNW AC Intertie are in existence and operable, unless otherwise earlier terminated by written agreement of both of the Parties or unless terminated pursuant to the terms of this Agreement. All

liabilities incurred under this Agreement shall be preserved until satisfied.

- (b) Notwithstanding subsection 2(a), no Capacity Ownership Rights may be exercised by Puget until payment is made by Puget pursuant to paragraph 9(a)(1) and received by Bonneville.
- (c) If Bonneville does not receive the payment from Puget pursuant to paragraph 9(a)(1), then Bonneville shall have the option to terminate this Agreement by delivering to Puget written notice of such termination.
- (d) Notwithstanding subsection 2(a), if Bonneville incurs End of Term Costs, the following provisions of this Agreement, and all rights and obligations thereunder, shall continue in full force and effect until Bonneville renders its final bill to Puget pursuant to subsection 9(b), unless this Agreement is earlier terminated by mutual agreement of the Parties: subsections 2(b), 2(c), and 2(d), sections 1, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, and 23, and Exhibits A, B, C, D, F, G, H, and I. All liabilities incurred under such provisions of this Agreement shall be preserved until satisfied.
- (e) If this Agreement has not become effective pursuant to subsection 2(a) within 12 months following the date upon which Bonneville executes and delivers this Agreement to Puget, this Agreement shall be void ab initio and of no force or effect.

### **3. CAPACITY RIGHTS**

#### **(a) Purchase and Sale of Capacity**

Pursuant to the terms and conditions of this Agreement, Puget purchases from Bonneville and Bonneville sells to Puget the Capacity Ownership Rights.

(b) **Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, Puget shall notify Bonneville in writing of Puget's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and Puget shall have the right to utilize its Scheduling Share pursuant to the paragraph Puget elects. Prior to Bonneville's receipt of such notification, Puget shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If Puget fails to make an election within the prescribed time period, Puget shall be deemed to have elected the option set forth in paragraph 3(b)(1).

(1) **No Third Party Wheeling**

- (A) Except as expressly provided in subparagraph 3(b)(1)(B), Puget shall not use its Scheduling Share to transmit power or energy (except for inadvertent power flows) that Puget does not own at the California-Oregon border or for which transmission Puget receives any revenue that would be reportable in Puget's accounting system where revenues received for wheeling for other entities would be booked.
- (B) If Puget's Scheduling Share is not fully utilized by Puget in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions over the unused portion of Puget's Scheduling Share for such hour but no longer than such hour. Puget shall be compensated for such wheeling solely by the payments as described in sections 3(b)(1)(B)(i) and (ii) below. For purposes of this subparagraph 3(b)(1)(B), Puget's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Puget has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis,

any transaction for such hour on any MW amount of Puget's Scheduling Share. In return for Puget's Scheduling Share being made available to Bonneville pursuant to this subparagraph 3(b)(1)(B), Bonneville shall pay Puget

- (i) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a north-to-south direction under the IS-93 rate, section II.A, or its successor to other entities in such hour, and (2) the ratio of Puget's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour, and
  
- (ii) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a south-to-north direction under the IS-93 rate, section II.A or its successor to other entities in such hour, and (2) the ratio of Puget's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour; provided, however, that Bonneville shall not be required to make payments for such south-to-north wheeling pursuant to this section 3(b)(1)(B)(ii) earlier than two years after the Effective Date.

Bonneville shall make payments pursuant to this subparagraph 3(b)(1)(B) in accordance with paragraph 9(f)(1).

- (C) During an outage resulting from maintenance activities on the PNW AC Intertie performed by Bonneville other than maintenance activities undertaken due to emergencies or uncontrollable forces, the following shall apply:
- (i) When Puget's Scheduling Share for any given hour is reduced as a consequence of such outage which reduces in Bonneville's PNW AC Intertie Operational Transfer Capability such that Puget's Scheduling Share for such hour is less than the MW amount of the aggregate of Puget's net firm transactions identified by Puget to Bonneville pursuant to section 3(b)(1)(C)(iv) for such hour, Bonneville shall, subject only to sections 3(b)(1)(C)(ii) and (iii) and to the immediately succeeding sentence, wheel on a firm basis that portion of Puget's firm transactions that equals the difference between Puget's Scheduling Share for such hour and the MW amount of the aggregate of Puget's firm transactions for such hour up to, but not in excess of, Puget's Capacity Ownership Share. Notwithstanding the foregoing, Bonneville shall only be obligated to provide such wheeling to the extent that each party with whom Puget is conducting such firm transactions has received a sufficient AC Intertie capacity allocation in California to accommodate such transactions. Puget shall pay the IS-93 rate, section II.A, or its successor for such wheeling pursuant to this section 3(b)(1)(C)(i) in accordance with subsection 9(d).
- (ii) Bonneville shall not be obligated to provide such wheeling to Puget pursuant to section

3(b)(1)(C)(i) if no PNW AC Intertie Operational Transfer Capability is available to Bonneville after Bonneville has scheduled all of Bonneville's Firm Schedules. For purposes of this section, "Bonneville's Firm Schedules" shall mean schedules for assured delivery or other firm transmission contracts pursuant to the Long-Term Intertie Access Policy, as revised or amended, or its successor, and schedules for Bonneville's firm power and energy sales and exchange transactions.

- (iii) Bonneville shall not be obligated to provide such wheeling to Puget pursuant to section 3(b)(1)(C)(i) until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to Puget or until October 1, 1994, whichever occurs sooner.
  
- (iv) No later than ten Working Days prior to the first day of deliveries under a firm transaction, Puget shall identify such firm transaction to Bonneville. Puget shall identify such firm transaction to Bonneville by providing to Bonneville a copy of Puget's contract for such firm transaction (after information considered proprietary by Puget has been redacted by Puget). Bonneville shall review such contract to verify that the transaction is firm. If Puget and its contractor represent or state in writing that the transaction set forth in their contract is firm, Bonneville shall accept that written representation or statement as dispositive of the question of whether such transaction is firm. Implementation of such procedures in this section 3(b)(1)(C)(iv) may be varied by the

mutual agreement of the Parties' Schedulers.  
Such mutual agreement may, but need not, be  
written.

- (D) Puget retains any and all rights of access which it would otherwise have to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(2) **Third Party Wheeling**

- (A) Puget may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by Puget. Puget shall have no obligation under this Agreement to make available to Bonneville any portion of Puget's Scheduling Share which is unused in any hour, and Bonneville shall not schedule over Puget's Scheduling Share without Puget's prior consent.
- (B) Puget hereby waives any and all rights of access to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor; provided, however, that Bonneville may, at its option, provide Puget with access to Bonneville's PNW-PSW Intertie pursuant to any provision of the Long-Term Intertie Access Policy, as revised or amended, or its successor.
- (C) Puget shall provide Bonneville with the information set forth in sections 3(b)(2)(C)(i) through 3(b)(2)(C)(iii) when Puget uses its Scheduling Share to export from the Pacific Northwest energy or power received from third parties. Such exports of energy or power on a real-time basis or for durations of less than four months are excluded from this obligation. For exports of four

months or longer duration made on behalf of third parties pursuant to paragraph 3(b)(2), such information shall include:

- (i) the name and business address of the third party;
- (ii) the amount of power or energy and the duration of the transaction; and
- (iii) the name of the recipient or purchaser of such power.

Any additional information needed by Bonneville will be obtained from such third party.

#### 4. SCHEDULING

- (a) Puget (and only Puget) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Puget's Scheduling Share for such hour. The MW amount of Puget's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Puget's north-to-south schedules and south-to-north schedules (net schedules) for such hour.
- (b) Puget shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1) and 4(b)(2). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours referenced in paragraphs 4(b)(1) and 4(b)(2) are Pacific Time.

##### (1) Preschedules

- (A) Bonneville shall make available to Puget on each Working Day as soon as practicable after 0800 hours



information regarding the PNW AC Intertie Operational Transfer Capability with respect to Preschedules. In the event an emergency or uncontrollable force causes a change in the PNW AC Intertie Operational Transfer Capability, Bonneville shall notify Puget of such change as soon as practicable.

- (B) If Long-Term Intertie Access Policy Condition 1 Formula Allocation Procedures or their successor (Condition 1) are expected by Bonneville to become effective, Bonneville shall so notify Puget no later than 0930 hours on the Working Day prior to the day on which Condition 1 is expected to become effective. Bonneville shall notify Puget no later than 0930 hours on the Working Day prior to the day on which Condition 1 ceases to be in effect.
- (C) Puget shall submit its Preschedule to the Joint Intertie Scheduling Office no later than 1000 hours on each Working Day if Condition 1 is in effect. If Condition 1 is not in effect, Puget shall submit its Preschedule to the JISO no later than 1430 hours on each Working Day.

(2) **Real-time Scheduling**

- (A) Real-time Schedules shall be arranged through Bonneville's real-time scheduling office. Bonneville's real-time Scheduler shall make reasonable efforts to receive Real-time Schedules; provided, however, that Bonneville's real-time Scheduler may, but is not required to, accept Real-time Schedules between 1500 and 2200 hours on the Working Day preceding the day for which such Real-time Schedule is submitted.

- (B) Real-time Schedules shall be arranged for a full hour. Arrangements shall be completed no later than 30 minutes prior to that hour.
- (C) Puget shall use best efforts to keep schedule changes to a minimum; provided, however, that for purposes of this subparagraph 4(b)(2)(C), "best efforts" shall not be deemed to refer to efforts made regardless of their economic effect.
- (D) The requirements set forth in subparagraphs 4(b)(2)(B) and 4(b)(2)(C) do not preclude schedule changes at other times as may be deemed necessary by any control area operators or other entities involved in effectuating such schedule changes. Such control area operators and other entities shall be notified by Bonneville of such schedule changes as soon as practicable in accordance with Prudent Utility Practice for purposes of coordinating ramps and proper accounting. Such schedule changes shall be deemed to occur at mid-ramp. The mid-ramp time and the integrated value for the hour shall be subject to the mutual agreement by such control area operators and other entities.
- (E) Subject to compliance with subparagraphs 4(b)(2)(A) through 4(b)(2)(D) and with other applicable PNW AC Intertie scheduling practices then in effect, Bonneville shall make Puget's schedule change.

- (c) Bonneville shall make deliveries of power or energy to the California-Oregon border or the John Day Substation, as appropriate, pursuant to schedules submitted in accordance with this section 4; provided, however, that Bonneville shall not be required to make such deliveries in an hour to the extent that Puget's schedule exceeds Puget's Scheduling Share for such hour, except as may be expressly provided pursuant to subparagraph 3(b)(1)(C).

## 5. UPGRADES

- (a) Bonneville shall consult with the Committee one time each year regarding any plans for Upgrades.
- (b) Prior to the completion of an Upgrade, Bonneville shall provide to Puget information in writing regarding estimated costs and the MW amount of such Upgrade, to the extent that such information is available to Bonneville.
- (c) As soon as practicable following the completion of an Upgrade, Bonneville shall notify Puget in writing of the following: (1) the MW amount of such Upgrade; (2) the capital and related costs (less any amount of such costs collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, to Bonneville for completing or implementing such Upgrade; and (3) calculations of (A) Puget's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade and (B) Puget's Capacity Ownership Percentage multiplied by the capital and related costs, if any, to Bonneville for completing or implementing such Upgrade. Puget may elect to acquire a share of such Upgrade in an amount up to Puget's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade. Within 100 days from receipt of such written notice from Bonneville, Puget shall notify Bonneville in writing of Puget's decision regarding such acquisition. If Puget elects to acquire, pursuant to this subsection 5(c), a portion of such Upgrade, Puget's notice to Bonneville shall include the percentage of such Upgrade that Puget elects to acquire (Acquisition Percentage). If

Puget fails to notify Bonneville within such 100-day period, Puget shall be deemed to have elected not to acquire any of such Upgrade.

- (d) If Puget elects to acquire a portion of an Upgrade pursuant to subsection 5(c), the cost to Puget shall be Puget's Acquisition Percentage multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such cost collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, incurred by Bonneville for completing or implementing such Upgrade. Puget shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
  
- (e) If Puget's Acquisition Percentage with respect to an Upgrade equals its Capacity Ownership Percentage and the Acquisition Percentage of any other Capacity Owner with respect to such Upgrade is less than its Capacity Ownership Percentage, then the following shall apply:
  - (1) Bonneville shall, in a timely manner, provide written notice simultaneously to Puget and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage) of the MW amount equal to 100 percent of that portion of an Upgrade offered to, but not acquired by, the Capacity Owners pursuant to subsection 5(c) (Unacquired Share). If Puget and each of such other Capacity Owners have agreed in writing to an apportionment as among themselves of the Unacquired Share (Apportionment), Puget may, within 45 days following receipt of such written notice from Bonneville, by written notice request Bonneville to offer in writing to Puget such portion of the Unacquired Share as has been apportioned to Puget pursuant to the Apportionment, and Bonneville shall offer to Puget such portion of the Unacquired Share.
  
  - (2) If Bonneville does not receive from Puget and from each Capacity Owner referred to in paragraph 5(e)(1) the requests for offer pursuant to paragraph 5(e)(1) within the 45-day period

specified in such paragraph, Bonneville shall, in a timely manner, offer in writing simultaneously to Puget and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage), respectively, a portion of an Upgrade offered to, but not acquired by, the other Capacity Owners pursuant to paragraph 5(e)(1) (Second Unacquired Share) up to the "Additional Share Offered" determined as follows:

$$\text{Additional Share Offered} = (A + B) \times C$$

where: A = Puget's Capacity Ownership Percentage.

B = Percentage equal to the sum of Capacity Ownership Percentages of Capacity Owners that acquired respectively an Acquisition Percentage equal to their Capacity Ownership Percentage.

C = Second Unacquired Share.

(3) Within 30 days following Puget's receipt of Bonneville's written offer pursuant to paragraph 5(e)(2), Puget shall notify Bonneville in writing of Puget's decision regarding acquisition of the Additional Share Offered. If Puget fails to notify Bonneville within such 30-day period, Puget shall be deemed to have elected not to acquire any of the Additional Share Offered. If Puget elects pursuant to this paragraph 5(e)(3) to acquire any or all of the Additional Share Offered, then:

(A) Puget shall include in its notice to Bonneville pursuant to this paragraph 5(e)(3) such share (Additional Share Acquired) of the Additional Share Offered as Puget elects to acquire pursuant to this paragraph 5(e)(3), and

(B) the cost to Puget with respect to such acquisition shall be equal to the proportion of the Additional Share Acquired to such Upgrade multiplied by the capital and related costs for such Upgrade pursuant to the CO-94

rate and subsection 9(c) (less any amount of such costs collected by Bonneville through charges other than payments by Puget pursuant to subsection 5(d) or subparagraph 5(e)(3)(B)), if any, to Bonneville for completing or implementing such Upgrade. Puget shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.

- (f) All capacity offered but not acquired pursuant to subsections 5(c) and (e) shall for purposes of this Agreement remain with Bonneville.
- (g) After Puget has either accepted or declined all offers of capacity by Bonneville pursuant to subsections 5(c) and (e), Puget's Capacity Ownership Share, Capacity Ownership Percentage, and Scheduling Percentage in Exhibit C shall be revised to reflect changes resulting from Puget's elections pursuant to subsections 5(c) and (e). Revision of Exhibit C shall be pursuant to subsection 19(d). Exhibit G shall be revised accordingly pursuant to subsection 19(i).

## **6. SALE OR ASSIGNMENT**

- (a) This Agreement or any interest herein shall not be transferred, sold, alienated, or assigned by Puget to any person without Bonneville's prior and express written consent. Such consent shall not be unreasonably withheld. In determining whether to grant its consent under this subsection 6(a), Bonneville shall take into consideration information including, but not limited to, whether the person or entity to whom this Agreement or any interest therein is proposed to be transferred, sold, alienated, or assigned is a person or entity entitled to request and receive transmission services pursuant to section 211 of the Federal Power Act, whether such person or entity can either provide its own scheduling services or has contracted with another entity to provide such scheduling services, whether such person or entity has the financial capability to meet the payment obligations under this Agreement, and whether the person or entity is either electrically interconnected to Bonneville's transmission system or has

contractual arrangements for wheeling with others who are electrically interconnected to Bonneville's transmission system. This Agreement shall inure to the benefit of and be binding upon the Parties, their respective legal representatives, permitted assigns, and successors in interest. Any transfer, sale, alienation, or assignment made by Puget in violation of this section 6 shall be void ab initio and without any force or effect whatsoever.

- (b) Bonneville hereby consents to the transfer, sale, alienation, or assignment by Puget to any other Capacity Owner of all or part of its Capacity Ownership Share and all of Puget's rights and obligations pursuant to this Agreement with respect thereto. Bonneville hereby further consents to the transfer, sale, alienation, or assignment by Puget of the entire Agreement and of all of Puget's rights and obligations under this Agreement to a Scheduling Utility.
- (c) Bonneville hereby consents to the assignment by Puget of this Agreement or of any of Puget's rights under this Agreement as security for any indebtedness, whether present or future, of Puget pursuant to any mortgage, trust, security agreement or similar instrument of indebtedness (each such instrument, a Debt Instrument) made by and between Puget and any mortgagee, trustee, secured party or holder of such instrument of indebtedness, respectively; provided, however, that if Puget has defaulted in the performance of its obligations under any Debt Instrument, such that the mortgagee, trustee, secured party or holder of such Debt Instrument, as the case may be, would be entitled at that time to accelerate the amount of indebtedness under such Debt Instrument, Puget shall give Bonneville prompt written notice in reasonable detail of such default and shall, at Bonneville's election, enter into good faith discussions with Bonneville regarding the cure of such default.
- (d) If Puget transfers, sells, alienates, or assigns, with Bonneville's consent, all or any portion of this Agreement and any rights and obligations pursuant to this Agreement to any person or party, Puget shall give Bonneville written notice of such transfer, sale, alienation,

or assignment within 10 days after the execution and delivery of the agreement effectuating such transaction by all parties to such transaction.

## **7. OPERATION, MAINTENANCE, AND MANAGEMENT**

- (a) Pursuant to the terms and conditions of the Northwest Intertie Agreements, Bonneville is the operator of the PNW AC Intertie. As such, Bonneville is responsible for the dispatch of the PNW AC Intertie in accordance with Prudent Utility Practice. Bonneville's duties as operator of the PNW AC Intertie shall include, but are not limited to, consistent with Prudent Utility Practice and Northwest Intertie Agreements: (1) determining the PNW AC Intertie Operational Transfer Capability; (2) implementing and assisting in rectifying emergency outages on the PNW AC Intertie due to system emergencies or uncontrollable forces; (3) implementing maintenance outages; and (4) giving and receiving switching orders on the PNW AC Intertie. In making any determination or in taking any other action referred to in the immediately preceding sentence, Bonneville shall give fair consideration to Puget's interests to the extent such interests have been expressed to Bonneville in writing. Bonneville shall operate, maintain, and manage Bonneville's PNW AC Intertie, and study, plan, and implement Upgrades, consistent with Prudent Utility Practice.
- (b) Bonneville shall determine and revise as necessary the PNW AC Intertie Rated Transfer Capability consistent with Prudent Utility Practice and engineering studies based on then existing reliability criteria developed by the North American Electric Reliability Council, the Western Systems Coordinating Council, the Northwest Power Pool, and Bonneville. In the event the PNW AC Intertie Rated Transfer Capability is changed, Bonneville shall promptly notify Puget in writing of such change and the new PNW AC Intertie Rated Transfer Capability. If and to the extent that the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability



change substantially, Bonneville shall notify Puget in writing of such change.

- (c) If at any time during the Term, Bonneville's PNW AC Intertie Rated Transfer Capability becomes less than 3450 MW, or if at any time during the Term there is an imminent likelihood that Bonneville's PNW AC Intertie Rated Transfer Capability would become less than 3450 MW, then Bonneville shall reinforce the Federal Columbia River Transmission System so as to raise Bonneville's PNW AC Intertie Rated Transfer Capability to 3450 MW or otherwise to prevent Bonneville's PNW AC Intertie Rated Transfer Capability from becoming less than 3450 MW. Puget's Capacity Ownership Share shall not be decreased on account of any failure by Bonneville to reinforce the Federal Columbia River Transmission System pursuant to this subsection 7(c).
- (d) In the event that Bonneville implements a Reinforcement pursuant to subsection 7(c), Bonneville shall equitably allocate the Reinforcement Cost for such Reinforcement between Bonneville and Puget based on factors including, but not limited to, load responsibility, contractual obligation and generation integration responsibility. Any equitable allocation or agreed to allocation (pursuant to the immediately succeeding sentence) of a Reinforcement Cost pursuant to this subsection 7(d) shall be reflected as a Reinforcement Cost in an Operating Plan proposed by Bonneville pursuant to section 13. To the extent that Bonneville and Puget have agreed in writing to an allocation of a Reinforcement Cost incurred by Bonneville pursuant to an agreement or modification referred to in subsection 8(b), the Reinforcement Cost so allocated shall not be subject to arbitration pursuant to section 14 or section 15. Any Reinforcement Cost not allocated to Puget pursuant to this subsection 7(d) shall not be payable by Puget pursuant to this Agreement.
- (e) Bonneville shall provide Puget notice of maintenance outages in accordance with the accepted standards for notice on the PNW AC Intertie. Such notice shall include an evaluation of the impact on

Puget's Scheduling Share. In scheduling or planning maintenance on PNW AC Intertie, Bonneville shall give fair consideration to Puget's interests to the extent such interests have been expressed to Bonneville in writing.

**8. EXISTING AGREEMENTS**

- (a) Bonneville shall use good faith efforts to maintain in effect the Interconnection Agreement or its successor.
- (b) Bonneville shall use its best efforts to maintain Puget's rights under this Agreement (i) by making no modification to the Northwest Intertie Agreements, (ii) by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie, and (iii) by making no modification to the agreements referred to in the immediately preceding clause (ii) that would have a substantial negative impact on Puget's rights pursuant to sections 3, 4, 7, or to subsection 9(b), 9(c), or 11(a) without Puget's prior written consent. Without limiting, modifying, or otherwise affecting any of its rights pursuant to sections 9, 13, 14, 15, and 16, Puget hereby consents to Bonneville's modification of the Northwest Intertie Agreements or Bonneville's entering into other agreements or modification to such Agreements with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification or such agreement is made or entered into by Bonneville for the purpose of performing Bonneville's obligations pursuant to subsection 7(c).

**9. PAYMENT PROVISIONS**

As full compensation for their respective payment obligations under this Agreement, Puget shall make payments to Bonneville in accordance with the provisions of this section 9, and Bonneville shall make payments and refunds to Puget in accordance with the provisions of this section 9.

(a) **Lump Sum Payment**

(1) As soon as practicable after the Effective Date, Bonneville shall render a bill to Puget for the Initial Lump Sum Payment (less the negotiation deposit, if any, with applicable interest as described in section C of Exhibit D) and such bill shall include as an attachment and as part of such bill a completed section C of Exhibit D, setting forth the calculation of such Initial Lump Sum Payment due Bonneville in accordance with section IV.A of the CO-94 rate set forth in Exhibit A. Puget shall make such payment pursuant to the CO-94 rate and the applicable GTRSPs set forth in Exhibit A. Each of Bonneville and Puget agrees that section C of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

(2) **Calculation and Billing of the Adjusted Capacity Ownership Price**

(A) Approximately December 1995, or as soon as practicable thereafter, Bonneville shall, in accordance with section IV.B of the CO-94 rate set forth in Exhibit A, calculate the Adjusted Capacity Ownership Price to reflect actual construction costs of the facilities listed in section A of Exhibit D and the actual AFUDC with respect to such facilities. Such calculation shall be made in accordance with column 2, section B of Exhibit D.

(B) Promptly after Bonneville has calculated the Adjusted Capacity Ownership Price pursuant to subparagraph 9(a)(2)(A), Bonneville shall render a bill or refund voucher to Puget, and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2), section B of Exhibit D (with a completed column 2), and a completed section D of Exhibit D reflecting the Adjusted Lump Sum Payment. If the

Adjusted Lump Sum Payment is greater than the Initial Lump Sum Payment, Puget shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in such bill, which amount shall be equal to the amount set forth on line 7, section D of Exhibit D (such amount including interest as set forth on line 6, section D of Exhibit D). If the Adjusted Lump Sum Payment is less than the Initial Lump Sum Payment, Bonneville shall pay to Puget, within 30 days after the date of such refund voucher, the amount set forth in such refund voucher, which amount shall be equal to the amount set forth on line 7, section D, of Exhibit D (such amount including interest as set forth on line 6, section D, of Exhibit D). Each of Bonneville and Puget agrees that sections A, B, and D of Exhibit D are consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(3) Calculation and Billing of the Revised Adjusted Capacity Ownership Price**

- (A) After payment is made by Puget pursuant to subparagraph 9(a)(2)(B), or a refund is made by Bonneville to Puget pursuant to subparagraph 9(a)(2)(B), Bonneville may, in accordance with the CO-94 rate set forth in Exhibit A, make one or more adjustments to the Adjusted Capacity Ownership Price; provided, that any such adjustment shall be made by Bonneville within 30 days after the date on which
- (i) Bonneville receives, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp or any other entity performing work for Bonneville on the Third AC Intertie Project, payment from Transmission Agency of Northern California,

PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, or (ii) Bonneville pays, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, any amount to Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project; and provided, further, that no adjustment of the Adjusted Capacity Ownership Price or of any Revised Adjusted Capacity Ownership Price shall be made by Bonneville after December 31, 2005.

- (B) Promptly after Bonneville has calculated a Revised Adjusted Capacity Ownership Price, Bonneville shall render to Puget a bill or refund voucher with respect to such Revised Adjusted Capacity Ownership Price and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), section B of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), and a completed section E of Exhibit D reflecting the current Revised Adjusted Capacity Ownership Price and the current Revised Adjusted Lump Sum Payment. If the current Revised Adjusted Lump Sum Payment with respect to such Revised Adjusted Capacity Ownership Price is greater than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, then Puget shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to

which the Parties may mutually agree, the amount set forth in the bill referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E, of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E, of Exhibit D). If the current Revised Adjusted Lump Sum Payment is less than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, Bonneville shall pay to Puget, within 30 days after the date of such refund voucher, the amount set forth in the refund voucher referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E of Exhibit D). Each of Bonneville and Puget agrees that section E of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

- (4) For purposes of implementing the CO-94 rate, the following shall apply:
  - (A) the calculations pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the adjustment "to reflect the difference between the actual and the estimated Capacity Ownership Price" required under section IV.B of the CO-94 rate;
  - (B) the calculations of interest pursuant to footnote 2 of section D of Exhibit D and footnote 2 of section E of Exhibit D shall be deemed to be the computation of "interest using the weighted average interest rate on Bonneville's outstanding bonds" required pursuant to section IV.B of the CO-94 rate;

- (C) the calculations of the Adjusted Capacity Ownership Price and of the Revised Adjusted Capacity Ownership Price pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the determination of the "actual Capacity Ownership Price" required pursuant to section IV.B of the CO-94 rate;
- (D) as used in the CO-94 rate, the terms "Bonneville's PNW AC Intertie," "PNW AC Intertie," "Third AC Intertie," "Third AC Intertie Project," and "Third AC Intertie System Reinforcement" shall be deemed to have the respective meanings of such terms set forth in section 1;
- (E) as used in the CO-94 rate, the term "Capacity Ownership Share" shall be deemed to mean "Capacity Ownership Percentage" as defined in section 1;
- (F) the indirect costs and overhead costs described in footnote 5 of section B of Exhibit D shall be deemed to be the indirect costs and overhead costs referred to in section III.A of the CO-94 rate; and
- (G) the last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

(5) For purposes of application of the CO-94 rate set forth in Exhibit A, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:

- (A) section I;
- (B) section III.A;
- (C) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
- (D) subsection 4 of section IV.A;
- (E) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A; and
- (F) for purposes of subsection 16(e) of this Agreement and as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

**(b) Annual Charges**

**(1) Payments Pursuant to AC-93 Rate**

- (A) From and after the first Working Day after Bonneville receives payment from Puget pursuant to paragraph 9(a)(1), Bonneville shall bill Puget on the monthly power bill in accordance with the AC-93 rate set forth in Exhibit A. Puget shall pay such bill in accordance with the applicable GTRSPs set forth in Exhibit A.



- (B) For purposes of application of the AC-93 rate, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
- (i) section I;
  - (ii) section III.A;
  - (iii) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
  - (iv) the first sentence of subsection 3 of section IV.A;
  - (v) subsection 4 of section IV.A;
  - (vi) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A;
  - (vii) the first paragraph of subsection 6 of section IV.A; and
  - (viii) as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.
- (C) The last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

- (D) Bonneville hereby agrees that the provisions of the AC-93 rate shall have no application or effect with respect to the following:
  - (i) any replacement of the series capacitor banks containing polychlorinated biphenyl at the Sand Springs, Sycan and Fort Rock Substations; and
  - (ii) any replacement commenced prior to the Effective Date or not completed prior to September 30, 1995.
- (E) Upon and after the effective date of the annual costs rate set forth in Exhibit B, Bonneville shall cease billing Puget pursuant to the AC-93 rate.

**(2) Payments Pursuant to Annual Costs Rate**

From and after the date the annual costs rate set forth in Exhibit B becomes effective, the following shall apply:

- (A) **Operations Costs, Maintenance Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs**
  - (i) During each fiscal year during the Term, Bonneville shall bill Puget on the monthly power bill, and Puget shall pay, pursuant to Exhibit B,

forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for such fiscal year. Such costs shall be, respectively, the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the fiscal year in which such month occurs.

- (ii) Within eight months after the end of each fiscal year during the Term (such fiscal year being hereinafter referred to as a "Fiscal Year"), Bonneville shall determine and calculate, pursuant to Exhibit I, Schedules A, B, D, E, F, G, and H, actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year most recently ended.
- (iii) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year is greater than the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End

of Term Costs for the Fiscal Year, Bonneville shall refund to Puget the difference between such forecast costs and such actual costs as a lump sum payment, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Bonneville shall, promptly following the date on which the calculation of such difference is made, provide Puget written notice of such refund. Within the 30-day period referred to in the first sentence of this section 9(b)(2)(A)(iii), Bonneville shall provide to Puget an Operating Plan amended in accordance with subsection 13(k) containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (iv) If, based on the calculation performed pursuant to subparagraph 9(b)(2)(A)(ii), the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is equal to or less than 105 percent, but greater than 100 percent, of the sum of the forecast Operations costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and

Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs in the Operating Plan for the Fiscal Year, Bonneville shall bill to Puget on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Puget shall pay such bill in accordance with the Billing Provisions. Within the 30-day period referred to in the immediately preceding sentence, Bonneville shall provide to Puget an amended Operating Plan containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (v) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the actual Operations Cost, actual Maintenance Cost, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is greater than 105 percent of the sum of the forecast Operations Cost, forecast Maintenance Cost, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast

End of Term Costs for the Fiscal Year, Bonneville shall bill to Puget on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Puget shall pay such bill in accordance with the Billing Provisions; provided, however, that Bonneville shall not bill Puget pursuant to this section 9(b)(2)(A)(v) any amount which exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year unless and until such amount which exceeds 100 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year has been included in an Operating Plan amended pursuant to subsection 13(k).

- (vi) Simple interest shall be accrued on payments or refunds due pursuant to this paragraph 9(b)(2) with respect to any fiscal year during the Term using the weighted average interest rate on Bonneville's outstanding bonds or other debt instruments then used by Bonneville and such interest shall accrue from (and including) the date of the last day of such fiscal year to (but

excluding) the date of refund to Puget or to (but excluding) the due date of a payment due Bonneville.

**(B) Replacement Cost and Reinforcement Cost**

Bonneville shall bill Puget on the monthly power bill Replacement Costs for any Replacement and Reinforcement Costs for any Reinforcement. Bonneville shall render such bill within 15 months following the date on which the project work order for such Replacement or such Reinforcement, as the case may be, is closed. Puget shall pay such bill pursuant to Exhibit B and sections 9(b)(2)(B)(i), 9(b)(2)(B)(ii), 9(b)(2)(B)(iii) and 9(b)(2)(B)(iv).

- (i) If the forecast Replacement Cost for a Replacement is greater than the actual Replacement Cost for such Replacement or if the forecast Reinforcement Cost for a Reinforcement is greater than the actual Reinforcement Cost for such Reinforcement, Bonneville shall bill Puget the actual Replacement Cost for such Replacement or the actual Reinforcement Cost for such Reinforcement, as the case may be. Bonneville shall provide to Puget an Operating Plan amended in accordance with subsection 13(k) containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement, as the case may be.
- (ii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual

Reinforcement Cost is equal to or less than 105 percent, but greater than 100 percent, of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Puget such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Puget shall pay such bill pursuant to subparagraph 9(b)(2)(B). Bonneville shall provide to Puget an amended Operating Plan containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the difference between the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement.

- (iii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is greater than 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Puget such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Puget shall pay such bill pursuant to subparagraph 9(b)(2)(B); provided, however, that Bonneville shall not bill Puget pursuant to this subparagraph 9(b)(2)(B) any amount which exceeds 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, as the case may be, unless and until such amount which exceeds 100 percent of such forecast Replacement or such forecast Reinforcement Cost, as the case may be, has been included in an amended Operating Plan pursuant to subsection 13(k).



- (iv) Charges pursuant to sections 9(b)(2)(B)(i), (ii) and (iii) for Replacement Costs and Reinforcement Costs shall accrue simple interest pursuant to section III.D of Exhibit I.

(c) **Upgrade Charges**

For purposes of implementing the CO-94 rate, the following shall apply:

- (1) as used in the CO-94 rate, the term "upgrade" shall be deemed to mean "Upgrade" as defined in section 1, the term "rated transfer capability" shall be deemed to mean "PNW AC Intertie Rated Transfer Capability" as defined in section 1 and the term "AFUDC" shall be deemed to have the meaning set forth for such term in section 1;
- (2) the "Capacity Ownership Share of the capital and related cost of the upgrade," referred to in section III.B of the CO-94 rate shall be deemed to be the costs pursuant to subsection 5(d) and subparagraph 5(e)(3)(B), as applicable; and
- (3) "construction costs (including direct, indirect and overhead costs) and AFUDC" referred to in section III.B of the CO-94 rate and "related costs" referred to in section III.B of the CO-94 rate together shall be deemed to be Upgrade costs and shall be determined in the same manner in which Replacement Costs are determined pursuant to section III of Exhibit I; provided, however, that expenses that are properly allocable to an Upgrade (i.e., "related costs" referred to in section III.B of the CO-94 rate) in accordance with generally accepted accounting principles (as defined in Exhibit I) may be included by Bonneville in Upgrade costs for such Upgrade.

(d) **Payments of Charges Pursuant to Section 3(b)(1)(C)(i)**

Bonneville shall bill Puget for wheeling provided pursuant to section 3(b)(1)(C)(i) on Puget's monthly power bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A and Puget shall pay such bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A; provided, however, that under any successor to the IS-93 rate, Puget shall not be obligated to pay any rate or charge greater than the rate or charge payable by any other party to which Bonneville provides nonfirm wheeling services on Bonneville's PNW AC Intertie for such party's nonfirm transaction of a duration similar to Puget's wheeling transaction pursuant to section 3(b)(1)(C)(i).

(e) **Suspension for Failure to Perform**

- (1) If at any time during the term of this Agreement Bonneville does not receive payment due and owing to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d), Bonneville shall be entitled to suspend performance of its obligations to Puget pursuant to section 4 without incurring any liability to Puget therefor; provided, that Bonneville shall not be entitled to suspend performance pursuant to this paragraph 9(e)(1) earlier than five Working Days following receipt from Bonneville by Puget of written notice of such suspension. Such suspension shall continue in effect until the next Working Day following the Working Day on which Puget makes payment in full to Bonneville of the balance owed to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d). During the period of such suspension, Puget shall not be entitled to participate through the Committee in any review of an Operating Plan commenced by the Committee pursuant to section 13 during such period of suspension, or to participate in any arbitration commenced by the Committee pursuant to sections 14 and 15 during such period of suspension, or to participate in any audit commenced

by the Committee pursuant to section 16 during such period of suspension.

- (2) If during any period in any month Bonneville fails to make deliveries in accordance with subsection 4(c), Puget shall be entitled, without incurring any liability to Bonneville therefor, to delay any payment due and owing to Bonneville by Puget pursuant to subsection 9(b) or 9(d) for a period, equal to the period during which Bonneville failed to make such deliveries, commencing on the date the monthly power bill for such month would otherwise be payable by Puget pursuant to this Agreement; provided, however that Puget's entitlement pursuant to this paragraph 9(e)(2) shall apply only with respect to the amount of such monthly power bill to be paid directly to Bonneville or its agent.

**(f) Payments or Refunds by Bonneville**

- (1) Bonneville shall make any payment to Puget pursuant to subparagraph 3(b)(1)(B) within 30 days following the end of the month in which such payment becomes due to Puget pursuant to subparagraph 3(b)(1)(B).
- (2) Bonneville shall pay to Puget, in a lump sum, any refund due to Puget pursuant to subsection 16(e) or paragraph 16(f)(2) within 30 days following the date on which such refund becomes due to Puget pursuant to subsection 16(e) or paragraph 16(f)(2), respectively.
- (3) Bonneville shall pay any refund, credit, or payment due to Puget under section 18 pursuant to the terms and conditions set forth in section 18.
- (4) Each payment, credit or refund due to Puget by Bonneville pursuant to this Agreement shall be made by Bonneville, at Bonneville's option, (A) by check payable to the order of Puget,

(B) by electronic funds transfer of immediately available funds into such account as may be designated in writing by Puget from time to time for such purpose or (C) by crediting the amount of such payment, credit or refund on Puget's power bill.

## 10. TRANSMISSION LOSSES

- (a) To compensate Bonneville for transmission losses incurred by Bonneville in making deliveries scheduled by Puget pursuant to this Agreement, Puget shall make available, or arrange to have made available, to Bonneville, at any point mutually acceptable to the Parties at which the respective electric systems of Puget and Bonneville are interconnected, on the corresponding hour 168 hours later or on another hour to be agreed upon, the amounts of electric power equal to Puget's net PNW AC Intertie schedule multiplied by the appropriate loss factor specified in Exhibit E. Puget's net PNW AC Intertie schedule shall be, for any given hour, the absolute value of the sum of Puget's north-to-south schedules (positive) and south-to-north schedules (negative) for such hour.
- (b) Upon the conclusion of any review by Bonneville of the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan provided to the Committee pursuant to section 13. The Committee may make recommendations regarding such results and any revisions to the loss factor in Exhibit E, Part A. Only recommendations regarding assumptions (including, without limitation, data inputs and source of data) made by Bonneville in its review or revision of the loss factor in Exhibit E, Part A, and recommendations regarding the results of such review or revision shall be subject to arbitration pursuant to section 14.
- (c) Puget's Scheduling Share shall not be reduced by any amount of losses returned to Bonneville pursuant to subsection 10(a).

## 11. **REMEDIAL ACTIONS**

### (a) **Bonneville's Responsibilities**

- (1) Within five days after the Effective Date, Bonneville shall notify Puget in writing of the plan for remedial actions required to maintain the PNW AC Intertie Rated Transfer Capability, which plan shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice. If and to the extent that such plan is amended, modified, or replaced, Bonneville shall, promptly following such amendment, modification, or replacement, provide written notice to Puget of such amendment, modification, or replacement, as the case may be. Bonneville shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, required to maintain the portion of Bonneville's PNW AC Intertie Rated Transfer Capability not purchased by Capacity Owners. Such remedial actions shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice.
- (2) Bonneville shall be responsible for generating appropriate control signals for transmission to Puget for purposes of effectuating remedial actions pursuant to this section.

### (b) **Puget's Responsibilities**

- (1) Puget shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other remedial actions required to maintain Puget's Capacity Ownership Share. Such remedial actions shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1) and Prudent Utility Practice. Bonneville

may perform engineering analyses to confirm Puget's providing capability to arm and having available appropriate remedial actions pursuant to this paragraph 11(b)(1).

- (2) In any given hour, Puget shall be responsible for providing sufficient remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, to maintain Puget's schedule on the PNW AC Intertie for such hour. To the extent that load tripping or generator dropping is required as a remedial action by Puget pursuant to this paragraph 11(b)(2) in any given hour, the required amount of such load tripping or such generator dropping shall be determined by dividing the amount of power scheduled by Puget on Puget's Scheduling Share in such hour by the total amount of power scheduled on the PNW AC Intertie in such hour and multiplying the result by the total amount of generation or load (in MW) to be armed for the PNW AC Intertie in such hour.
- (3) Puget shall provide, design, operate, and maintain the necessary equipment to accept control signals from Bonneville and to transmit such signals to Puget's generator dropping, load tripping, or other remedial action sites, and to arm and initiate the appropriate control action(s). Such design, operation, and maintenance shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1), and Prudent Utility Practice.
- (4) Puget and Bonneville may mutually agree that Bonneville will, pursuant to terms and conditions mutually acceptable to the Parties, provide the remedial actions required of Puget pursuant to subsection 11(b).

**12. CAPACITY OWNERS' COMMITTEE**

**(a) Composition of Committee**

Puget may appoint one representative (and an alternate who may act in the absence of such representative) as a member of the Capacity Owners' Committee (Committee). If during any period Puget fails to appoint a representative to the Committee, Puget waives any and all rights during such period that would otherwise have accrued to it, individually or as a member of the Committee, pursuant to sections 12, 13, 14, 15, and 16 of this Agreement. Puget hereby appoints as its representative pursuant to this subsection the following representative and alternate to the Committee:

**Representative: Vice President Power Planning**

**Alternate: Manager Power Contracts**

**(b) Convening Meetings**

- (1) Any Capacity Owner that has appointed a representative to the Committee may convene a meeting of the Committee pursuant to the procedures set forth in subsection 12(e). The Capacity Owner convening a Committee meeting shall be responsible for preparing any necessary notices, identifying the subject matter and issues to be discussed, and transmitting notices and relevant documents to the other Committee members and, if appropriate, to Bonneville.**
- (2) At the written request of any Capacity Owner that has appointed a representative to the Committee, Bonneville shall attend Committee meetings.**
- (3) The Committee may conduct business only at a properly convened meeting at which a quorum, as defined in subsection 12(c), is present. The Committee shall make or convey any**

request, designation, recommendation, notice, appointment, submission, audit report or exception, or statement to which Bonneville is required to respond or which creates or triggers an obligation of Bonneville, pursuant to this Agreement, only upon a decision of the Committee made at a properly convened meeting at which a quorum is present.

- (4) Each fiscal year, Bonneville shall convene an annual meeting of the Committee. The purpose of such annual meeting shall be to discuss the Operating Plan delivered, pursuant to subsection 13(b), to each Capacity Owner that has appointed a representative to the Committee. Bonneville shall convene such annual meeting no earlier than 15 days, but no later than 30 days, following the date of such delivery of the Operating Plan.
- (5) In addition to the meeting referred to in paragraph 12(b)(4), Bonneville may, at its discretion, convene meetings of the Committee, pursuant to the procedures set forth in subsection 12(e), to present to the Committee any information Bonneville deems relevant.

(c) **Meeting Quorum**

The respective representatives of all of the Capacity Owners that have appointed a representative to the Committee, less one, shall constitute a quorum.

(d) **Meetings by Telephone Conference**

Committee meetings pursuant to the Capacity Ownership Agreements may be conducted by telephone provided all Capacity Owners and, if appropriate, Bonneville, are notified pursuant to the procedures set forth in subsection 12(e) of any such meeting.



(e) **Meeting Notices**

- (1) All Committee meeting notices pursuant to the Capacity Ownership Agreements shall be provided in writing no less than 14 days prior to such meeting.
- (2) Any Committee meeting notice required by this section shall be deemed properly made if delivered in person, by electronic facsimile, or by mail or other qualified delivery service, postage prepaid, to the person specified below:

**If to Bonneville:**

**Group Vice President for Marketing, Conservation and  
Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232  
Telephone (503) 230-5152  
Facsimile (503) 230-5207**

**If to Puget:**

**Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515  
Telephone (206) 462-3137  
Facsimile (206) 462-3175**

**If to Seattle:**

**Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101  
Telephone (206) 386-4530  
Facsimile (206) 386-4955**

If to PNGC:

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232  
Telephone (503) 288-1234  
Facsimile (503) 288-2334

If to Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201  
Telephone (206) 258-8211  
Facsimile (206) 258-8305

If to Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411  
Telephone (206) 502-8294  
Facsimile (206) 502-8628

Attendance at a meeting by a representative of a Capacity Owner constitutes waiver by such Capacity Owner of notice of such meeting.

- (3) Either Party may, by written notice to the other Party and to the Capacity Owners other than Puget, change the designation, address, or facsimile number of the person so specified by it in subsection 12(a) or paragraph 12(e)(2).

**13. OPERATING PLAN AND AMENDMENTS TO THE OPERATING PLAN**

- (a) The provisions of this section shall become effective commencing August 1, 1995; provided, however, that unless and until the annual costs rate set forth in Exhibit B is approved by FERC on an interim basis, Bonneville shall not have any right pursuant to this Agreement to bill or charge to Puget, and Puget shall not have any obligation pursuant to this Agreement to pay to Bonneville, any amount pursuant to any Operating Plan.
  
- (b) **Delivery of Operating Plan**
  - (1) On or before August 1, 1995, Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1996 and an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1997.
  
  - (2) Not later than one year preceding the first day of each fiscal year, other than the fiscal years specified in paragraph 13(b)(1), Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for such fiscal year.
  
- (c) Each Operating Plan delivered pursuant to subsection 13(b) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast costs for the fiscal year to which such Operating Plan pertains, and such Operating Plan may contain such other information as Bonneville may deem relevant; and each amendment of an Operating Plan delivered pursuant to subsection 13(k) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast or actual costs, as appropriate, for the fiscal year to which such Operating Plan pertains, and such amendment may contain such other information as Bonneville may deem relevant:

- (1) a forecast of, or the actual, Allocated Direct Cost of Operations Cost (pursuant to section I.C of Exhibit I), Indirect Cost of Operations Cost (pursuant to section I.D of Exhibit I), and Overhead Cost of Operations Cost (pursuant to section I.E of Exhibit I) in the format set forth in Exhibit I, Schedule A;
- (2) a forecast of, or the actual, Direct Cost of Maintenance Cost (pursuant to section II.B of Exhibit I), Indirect Cost of Maintenance Cost (pursuant to section II.D of Exhibit I), and Overhead Cost of Maintenance Cost (pursuant to section II.E of Exhibit I) in the format set forth in Exhibit I, Schedule B;
- (3) a forecast of, or the actual, Direct Cost of Replacements and Reinforcements (pursuant to section III.A of Exhibit I), Indirect Cost and Overhead Cost of Replacements and Reinforcements (pursuant to section III.B of Exhibit I), and AFUDC of Replacements and Reinforcements (pursuant to section III.C of Exhibit I) in the format set forth in Exhibit I, Schedule C, for each Reinforcement and Replacement which is expected to be, in the fiscal year to which the Operating Plan pertains, a planned new start, construction work in progress on a previously initiated Reinforcement or Replacement, as the case may be, or a closed work order. The forecast shall include for each such Reinforcement or Replacement an estimate of the total cost of construction and the cost to be incurred with respect to such Reinforcement or Replacement during each fiscal year until the work order for such Reinforcement or Replacement has been closed. Bonneville may elect, but shall not be required, to include in any such forecast the information set forth in the immediately preceding sentence regarding any Replacement and Reinforcement which is expected to be planned a new start in any fiscal year following the fiscal year to which the Operating Plan pertains. In the event Bonneville elects to forecast Direct Cost, Indirect Cost, and Overhead Cost of any Reinforcement or Replacement which is expected to be a

planned new start in any fiscal year subsequent to the fiscal year to which the Operating Plan pertains, Bonneville shall provide to the Committee such forecast costs, in the format set forth in Exhibit I, Schedule C (together with additional information pertinent to such forecast costs as required by paragraph 13(c)(9)), 30 days prior to the date such Operating Plan is delivered to the Committee pursuant to subsection 13(b). In addition, Bonneville shall include such forecast costs in the Operating Plan delivered to the Committee pursuant to subsection 13(b);

- (4) the General Plant Cost (pursuant to section IV of Exhibit I) in the format set forth in Exhibit I, Schedule D;
- (5) a forecast of, or the actual, Other Costs (pursuant to section V of Exhibit I) in the format set forth in Exhibit I, Schedule E;
- (6) a forecast of, or the actual, Contracts and Rates Costs (pursuant to section VI of Exhibit I) in the format set forth in Exhibit I, Schedule F;
- (7) a forecast of, or the actual, Power Scheduling Costs (pursuant to section VII of Exhibit I) in the format set forth in Exhibit I, Schedule G;
- (8) a forecast of, or the actual, End of Term Costs (pursuant to section VIII of Exhibit I) in the format set forth in Exhibit I, Schedule H. Such forecast shall include Bonneville's proposed apportionment of such End of Term Costs among Puget and Capacity Owners other than Puget and Bonneville's rationale for such apportionment;
- (9) additional information pertinent to the forecast costs, actual costs, and General Plant Cost provided pursuant to paragraphs 13(c)(1) through 13(c)(8), including, without limitation, descriptions of the activities or projects and explanations of the

costs comprising the Direct Cost components of such forecast costs, actual costs, and General Plant Cost, and explanations of MFU counts; and

- (10) if Bonneville has reviewed the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), the Operating Plan shall contain the results of such review, including any revision to the loss factor in Exhibit E, Part A, pursuant to subsection 10(b), and any additional information pertinent to such review.

**(d) Requests by Committee**

- (1) No later than 15 days after the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), the Committee may make a single request of Bonneville in writing for:

- (A) such supporting documentation, data, and information as may be reasonably necessary to analyze (i) the Operating Plan, or its constituent parts, delivered to the Committee pursuant to subsection 13(b), or (ii) any amendment to an Operating Plan pursuant to subsection 13(k); and
- (B) such documentation, data, and information relating to Bonneville's present or past activities or practices concerning Bonneville's PNW AC Intertie and to alternatives considered by Bonneville to costs or activities described in the Operating Plan or any amendment to an Operating Plan as may be reasonably necessary for the Committee to formulate recommendations pursuant to subsection 13(e);

provided, however, that with regard to requests for documentation, data, and information pursuant to this paragraph 13(d)(1), the Committee must designate in such

request the specific item in the Operating Plan or in any amendment to an Operating Plan to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information. Such single request may contain multiple parts.

- (2) The Committee shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to paragraph 13(d)(1).
- (3) Bonneville shall have 20 days from the date it receives any request pursuant to paragraph 13(d)(1) to provide the documentation, data, and information requested; provided, however, that Bonneville shall be under no obligation (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Committee, or (D) to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or any regulation and Executive Order applicable to Bonneville.
- (4) The Committee in such request shall designate one of its members to be its representative for the sole purpose of receiving such documentation, data, or information from Bonneville pursuant to this subsection 13(d). Bonneville shall deliver such documentation, data, or information to the representative designated by the Committee to receive such materials.

- (5) For purposes of this subsection 13(d) and subsection 13(f), each of Bonneville and the Committee shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests for, documentation, data, and information and responses to such requests.
- (e) The Committee shall have 20 days from the date on which it receives documentation, data, or information from Bonneville pursuant to subsection 13(d) or, if none was requested, 50 days from the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), whichever date is later, to recommend to Bonneville in writing a revision or revisions to any forecast cost or General Plant Cost in the Operating Plan. The Committee shall have the time periods set forth in subsection 13(m) to recommend to Bonneville in writing a revision or revisions to a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan. Such recommendation shall set forth, at a minimum, the exact revisions to the forecast cost or General Plant Cost proposed by the Committee and the reasons for such revisions. Failure of the Committee to recommend a revision or revisions to all or any portion of a forecast cost or General Plant Cost in the Operating Plan or a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan within the applicable time limit set forth above shall be deemed to constitute acceptance by the Committee of all portions of the forecast costs and General Plant Cost of the Operating Plan for which the Committee has not recommended a revision.
- (f) No later than 15 days after receipt of a Committee recommendation made pursuant to subsection 13(e), Bonneville may make a single request (which may contain multiple parts) in writing of the Committee for such supporting documentation, data, and information as may be reasonably necessary to analyze the Committee's recommendation, including without limitation, any estimated costs or forecast costs contained in such recommendation; provided, however, that the Capacity Owners that have appointed a representative to the Committee shall be under no obligation (1) to create additional



documentation, data, or information, (2) to provide documentation, data, or information that is not readily available to the Committee or to any Capacity Owner that has appointed a member to the Committee, (3) to provide to Bonneville documentation, data, or information that the Committee has previously provided to Bonneville; provided, further, that with regard to requests for documentation, data, and information pursuant to this subsection 13(f), (1) Bonneville must designate in such request the specific item in the Committee's recommendation to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information, and (2) Bonneville shall use reasonable efforts, consistent with Bonneville's needs as set forth in this subsection 13(f), to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to this subsection. Such single request shall be made of the Committee by delivering a copy of the request to each Capacity Owner that has appointed a representative to the Committee. The Committee shall have 20 days from the date of its receipt of Bonneville's request to provide a single response containing the documentation, data, and information requested.

- (g) If the Committee makes any recommendation in writing pursuant to subsection 13(e), Bonneville shall have the greater of 15 days from the date of receipt of the requested documentation, data, and information requested pursuant to subsection 13(f) or, if none was requested, 30 days from the date of receipt of the Committee's recommendations made pursuant to subsection 13(e) to, by written notice to each Capacity Owner that has appointed a representative to the Committee, accept the recommendation, accept the recommendation in part, reject the recommendation, or propose an action that is responsive to the Committee's recommendation and that is different from Bonneville's proposal contained in the Operating Plan. If Bonneville makes such a proposal, Bonneville shall set forth in such written notice the exact revisions to the Operating Plan. The Committee shall have 7 days from the date of receipt of Bonneville's proposal to make any requests in writing for supporting

documentation, data, and information as set forth in subsection 13(d). Bonneville shall have 7 days to respond to those requests as set forth in subsection 13(d). Failure of Bonneville to respond in writing to any recommendation of the Committee within the applicable time period set forth in this subsection 13(g) shall be deemed to constitute rejection of such recommendation.

(h) If Bonneville rejects all or any portion of the Committee's recommendation, or if the Committee elects not to accept a proposal made by Bonneville pursuant to subsection 13(g), then the Committee may

- (1) elect by written notice to Bonneville to refer to binding arbitration, pursuant to section 14 and consistent with subsections 13(i) and 14(b), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g); and
- (2) elect by written notice to Bonneville to refer to nonbinding arbitration pursuant to section 15 and consistent with subsections 15(a) and 15(d), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g).

**Failure of the Committee to elect to refer to arbitration**

- (A) such portion of any recommendation of the Committee not accepted by Bonneville within 15 days following Bonneville's rejection or acceptance in part of such recommendation of the Committee pursuant to subsection 13(g), or

(B) any proposal made by Bonneville pursuant to subsection 13(g) within 15 days following Bonneville's written notice of such proposal or, if documentation, data, or information was requested by the Committee pursuant to subsection 13(g), within 15 days following receipt by the Committee of such documentation, data, or information pursuant to subsection 13(g),

shall be deemed to constitute acceptance by the Committee of Bonneville's rejection or acceptance in part of the recommendation of the Committee or of Bonneville's proposal and waiver by the Committee of any right pursuant to this section 13 or to section 15 to arbitrate such recommendation or portion thereof.

(i) The Committee may, subject to the immediately succeeding sentence, arbitrate, pursuant to subsection 13(h); any recommendation by the Committee concerning a revision pursuant to this Agreement to a loss factor set forth in any Operating Plan or in any amendment to an Operating Plan or concerning any forecast cost or actual (allocated or otherwise) cost set forth in any Operating Plan or in any amendment to an Operating Plan (including the following costs and related items set forth in any Operating Plan, or in any amendment to an Operating Plan, pursuant to Exhibit I, Schedule A, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; Exhibit I, Schedule B, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; Exhibit I, Schedule C, lines 1, 2, 3, 4 and 5; Exhibit I, Schedule D, lines 3, 4, 5, 6, 7, 8, 9, 10 and 11; Exhibit I, Schedule E, lines 2 and 3; Exhibit I, Schedule F, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; Exhibit I, Schedule G, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; and Exhibit I, Schedule H, lines 1, 2, 3, and 4). The Committee's right pursuant to this subsection 13(i) to arbitrate any such recommendation shall be subject to the following limitations:

(1) if such recommendation, or portion thereof, includes a Replacement Cost for a Replacement or a Reinforcement Cost for a Reinforcement, and such Replacement Cost or Reinforcement Cost was included in a previous Operating Plan

(either of such costs, a Previous Operating Plan Cost), the Committee may arbitrate pursuant to this subsection 13(i) such recommendation, or portion thereof, only to the extent that such recommendation, or portion thereof, includes any Replacement Cost or Reinforcement Cost in excess of the Previous Operating Plan Cost;

- (2) the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, pertaining to a revision to a loss factor pursuant to this Agreement only to the extent such arbitration is permitted by subsection 10(b);
- (3) the Committee may arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning an Other Cost only to the extent that such Other Cost is a cost set forth in an Operating Plan or amendment to an Operating Plan pursuant to Exhibit I, Schedule E, line 2 and such recommendation, or portion thereof pertains to whether such Other Cost is properly allocated to Bonneville's PNW AC Intertie pursuant to Exhibit I, section V;
- (4) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in such Operating Plan or in any amendment to an Operating Plan, the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan only to the extent that such actual cost exceeds 105 percent of the forecast cost for such activity or such project; provided, however, that, without limiting any of Puget's rights

and benefits pursuant to subsection 16(c), the Committee may not arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan or in any amendment to an Operating Plan if such actual cost is less than 105 percent of the forecast for such activity or such project;

- (5) the Committee may not arbitrate, pursuant to this subsection 13(i), (a) the allocation by Bonneville pursuant to this Agreement of any of its costs to overall overhead costs or to overall indirect costs, or (b) the allocation by Bonneville pursuant to this Agreement of a portion of Bonneville's overall overhead costs and overall indirect costs to its total system operations costs, its total system maintenance costs, its total capital costs or its total indirect and overhead power scheduling costs; provided, however, that nothing in this paragraph (5) shall be deemed to prevent or restrict the Committee from arbitrating pursuant to this subsection 13(i) the level (rather than the allocation) of any of Bonneville's Exhibit I, Schedule A, line 9 total system operations indirect costs and line 11 total system operations overhead costs; Bonneville's Exhibit I, Schedule B, line 11 total system maintenance indirect costs and line 13 total system maintenance overhead costs; Bonneville's total capital costs; Bonneville's Exhibit I, Schedule F, line 6 total indirect contracts and rates costs and Bonneville's Exhibit I, Schedule F, line 7 total overhead contracts and rates costs; or Bonneville's Exhibit I, Schedule G, line 6 total indirect power scheduling costs and Bonneville's Exhibit I, Schedule G, line 7 total overhead power scheduling costs;
- (6) the Committee may not arbitrate any recommendation, or any portion thereof, regarding any amendment to an Operating Plan made pursuant to sections 9(b)(2)(A)(iv) and 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2);

- (7) the Committee may not arbitrate any such recommendation, or portion thereof, to the extent that in doing so the arbitrators would be required to decide a matter of law in order to render a decision pursuant to subsection 14(h). If, subsequent to the Effective Date, Bonneville is given legal authority to submit to binding arbitration matters of law, Bonneville shall enter into good faith negotiations with Puget and Capacity Owners other than Puget regarding a revision to this paragraph 13(i)(7) enabling arbitration of matters of law pursuant to this subsection 13(i) consistent with such legal authority; and
- (8) the Committee may not arbitrate any recommendation, or portion thereof, regarding an allocation of a Reinforcement Cost to the extent prohibited by subsection 7(d).

In arbitrating any recommendation, or portion thereof, pursuant to this subsection 13(i), the Committee may raise in support of such recommendation arguments regarding whether any forecast or actual cost should be based upon activities different in degree, but not in kind, from the activities upon which such forecast or actual cost in the Operating Plan is based.

- (j) Each Operating Plan provided pursuant to subsection 13(b) which has completed the Committee review process set forth in subsections 13(d) through 13(g) shall take effect on the first day of the fiscal year to which such Operating Plan pertains and shall remain in effect for the duration of such fiscal year.
- (k) At any time during the fiscal year in which an Operating Plan is in effect, or within 8 months after the end of such fiscal year, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast or actual Operations Cost, Maintenance Cost, General Plant Cost, Other Cost, Contracts and Rates Cost, Power Scheduling Cost, or End of Term Cost in such Operating Plan. At any time during the fiscal year an Operating Plan

is in effect, or within 30 months after a work order for a Replacement or Reinforcement is closed, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast cost or actual cost component for such Replacement or Reinforcement.

- (l) Any amendment made to any Operating Plan pursuant to subsection 13(k) shall be provided by delivery of a copy in writing of such amendment by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (m) Consideration of amendments to the Operating Plan pursuant to subsection 13(l) shall be consistent with the procedures set forth above in subsections 13(c) through 13(k), except that the time limits set forth in such subsections shall be reduced as follows: 15 days shall be 7 days, 20 days shall be 10 days, 30 days shall be 15 days, and 50 days shall be 25 days. For purposes of computing the time limits in this subsection 13(m), the date Bonneville provides the Capacity Owners with a proposed amendment, pursuant to subsection 13(k), shall be deemed to be the date the annual meeting was convened for purposes of paragraph 13(d)(1) and subsection 13(e).
- (n) Without limiting any of Puget's rights and benefits pursuant to subsection 13(i) and sections 14 and 15, any Operating Plan amended pursuant to section 9(b)(2)(A)(v) or 9(b)(2)(B)(iii), or subsection 13(k) shall take effect when such amendment is accepted by the Committee pursuant to subsection 13(e) or 13(h). Any Operating Plan amended pursuant to section 9(b)(2)(A)(iii), 9(b)(2)(A)(iv), 9(b)(2)(B)(i), or 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2) shall take effect as soon as such amendment is delivered by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (o) An Operating Plan shall, during the fiscal year in which such Operating Plan is in effect, establish the costs which Puget is obligated to pay pursuant to the terms and conditions of this

Agreement. In no event shall such Operating Plan, or any portion thereof, contain or constitute an obligation of Bonneville to undertake, or to expend funds on, activities described or indicated in such Operating Plan.

#### 14. **ARBITRATION**

- (a) During any arbitration process conducted pursuant to this section 14, Puget shall act through the Committee. Each of Bonneville and Puget agrees to be bound by any decision rendered by the arbitrators in any arbitration brought pursuant to subsection 13(i) and this section 14.
- (b) The Committee may initiate arbitration pursuant to subsection 13(i) by taking the following actions:
  - (1) an affirmative vote to initiate arbitration by at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  - (2) either of the following:
    - (a) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to subsection 13(i) within the applicable time period established in subsection 13(h); or
    - (b) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subsection 14(b) shall set forth in detail the matter or matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.



- (c) Bonneville shall, within 10 Working Days after receipt of the notice by the Committee referred to in subsection 14(b), appoint a second arbitrator and provide by written notice to each Capacity Owner that has appointed a representative to the Committee the name, street address and telephone number of the arbitrator appointed by Bonneville. The two arbitrators appointed by the Committee and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville.
- (1) If the arbitrators appointed by the Committee and by Bonneville, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville, then within 30 days after the date of the appointment of an arbitrator by Bonneville, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
- (2) If Bonneville fails to appoint an arbitrator within 15 days after receipt of the notice by the Committee referred to in subsection 14(b), then within 30 days after the date of such notice, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
- (3) If, pursuant to either paragraph 14(c)(1) or 14(c)(2), the Committee applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Committee shall give Bonneville written notice of such application within 5 days after the date of filing such application.
- (d) The three arbitrators appointed pursuant to subsections 14(b) and 14(c) shall select by a majority vote an alternative pursuant to subsection 14(g).

- (e) Within 10 days after the appointment of a third arbitrator pursuant to subsection 14(c), the arbitrators shall establish a schedule for submission of written positions by Bonneville and Puget, respectively. The arbitrators must establish a schedule for such submissions pursuant to this subsection 14(e) that will allow the arbitration to be concluded, and the decision of the arbitrators rendered pursuant to subsection 14(g), within 120 days following the date of the appointment of the third arbitrator. A copy of any submission by the Committee to the arbitrators pursuant to this section 14 shall be simultaneously served by the Committee on Bonneville, and a copy of any submission by Bonneville to the arbitrators pursuant to this section 14 shall be simultaneously served by Bonneville on each Capacity Owner that has appointed a representative to the Committee. The Committee shall state, in a letter to the arbitrators, as its proposed alternative to each Bonneville proposal in dispute, the recommendation proposed by the Committee pursuant to subsection 13(g) and rejected in whole or in part by Bonneville pursuant to subsection 13(g). Bonneville shall state its position and proposed resolution of the dispute in a letter to the arbitrators. If Bonneville made a proposal in response to such recommendation of the Committee pursuant to subsection 13(g), then such position and proposed resolution shall set forth such proposal, or if Bonneville made no such proposal, then such position and proposed resolution shall set forth the relevant portion of the Operating Plan. If, however, the arbitration concerns an exception pursuant to paragraph 16(f)(3), then the positions and proposed resolutions of Bonneville and the Committee shall be as established pursuant to such subsection. The Committee may then submit a response to Bonneville's letter, and Bonneville may thereafter submit a reply to the Committee's response. Bonneville and the Committee shall have an equal number of days to prepare and serve their replies.
- (f) No submission by either the Committee or Bonneville to the arbitrators pursuant to subsection 14(e) shall be more than 50 pages in length (not including exhibits). If requested in writing by either the

Committee or Bonneville, and for good cause shown, the arbitrators may permit any submission by such Party to exceed 50 pages.

- (g) The arbitrators shall select, as between the Committee's recommendation pursuant to subsection 13(e), on the one hand, and the portion of Bonneville's proposed Operating Plan to which the Committee's recommendation pertains or Bonneville's proposal pursuant to subsection 13(g) not accepted by the Committee, on the other, the alternative which
- (1) is consistent with the provisions of this Agreement and
  - (2) (A) in conformity with the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto, would better achieve the desired result consistent with safety, reliability, and cost-benefit or (B) if there are no such generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area, would, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, be reasonably expected to better achieve the desired result consistent with safety, reliability, and cost-benefit.
- (h) In applying the standards set forth in subsection 14(g), the arbitrators shall take into consideration, among other things (a) that Bonneville and Puget each have responsibilities for service to customers within and without the Pacific Northwest region in accordance with applicable law, (b) that Bonneville and others jointly own the PNW AC Intertie and Bonneville owes contractual obligations to those parties regarding the PNW AC Intertie, (c) that Bonneville must operate, as a practical matter, the PNW AC Intertie in coordination with the operation of the interconnected intertie facilities in California, and (d) that the PNW AC Intertie is a major import-export facility important to the service of loads in and out of the region.

- (i) In any arbitration pursuant to this section 14, the arbitrators shall choose, pursuant to subsection 14(g), only between the alternatives proposed by Bonneville and the Committee and shall have no authority to resolve such arbitration other than by selecting an alternative proposed by either Bonneville or the Committee.
- (j) Upon selection by the arbitrators of an alternative pursuant to subsection 14(g), then Bonneville shall amend the Operating Plan to cause it to conform to the decision of the arbitrators.
- (k) If the arbitrators have not made a selection of an alternative pursuant to subsection 14(i) before the date on which the Operating Plan becomes effective pursuant to subsection 13(j), then Puget shall make payments of annual charges pursuant to such Operating Plan. If the arbitrators subsequently select the Committee's alternative, then Bonneville shall, subsequent to amending such Operating Plan pursuant to subsection 14(j), refund to or bill Puget its pro rata share of the amount of the incremental difference between the costs set forth in such Operating Plan as amended pursuant to subsection 14(j) and 105 percent of the costs set forth in such Operating Plan, prior to its amendment pursuant to subsection 14(j), to the extent that such costs were incurred during the period from the first day of effectiveness of such Operating Plan pursuant to subsection 13(j) to the date of the arbitrators' decision, such refund to be made pursuant to subsection 9(f) and such payment to be made pursuant to subsection 9(b).
- (l) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 14 equal to  $1 + (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay its own expenses related to the arbitration proceeding including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.

- (m) Any judgment rendered by a court of competent jurisdiction upon an award made by the arbitrators pursuant to this section 14 may be entered in any court having jurisdiction thereof.

## 15. NONBINDING ARBITRATION

- (a) The Initiating Party (as defined in paragraph 15(e)(1)) may, subject to the immediately succeeding sentence, elect by written notice to Responding Party (as defined in paragraph 15(e)(1)) to refer to nonbinding arbitration pursuant to the other provisions of this section 15 the following: (i) if the Initiating Party is the Committee, any recommendation by the Committee, or any portion thereof, concerning any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 and (ii) any other issue, dispute, or controversy regarding the Parties' respective rights and obligations pursuant to this Agreement. The Initiating Party's right pursuant to this subsection 15(a) to arbitrate any recommendation or any issue, dispute or controversy shall be subject to the following limitations:

- (1) the Initiating Party may not arbitrate pursuant to this subsection 15(a): (A) any recommendation with respect to an Operating Plan or any amendment to an Operating Plan or (B) any issue, dispute, or controversy, which recommendation, issue, dispute or controversy may be arbitrated pursuant to subsection 13(i) or 16(f);
- (2) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation not permitted to be arbitrated pursuant to paragraphs 13(i)(1), 13(i)(3), 13(i)(4), and 13(i)(8);
- (3) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or

controversy concerning a loss factor or revision to a loss factor set forth in Exhibit E, Part A or Part B pursuant to this Agreement;

- (4) the Committee may not (but the Puget or Bonneville may) arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning any right or obligation of Puget pursuant to this Agreement that is not a right or obligation, as the case may be, of each other Capacity Owner under its respective Capacity Ownership Agreement; or
- (5) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operating Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs and forecast End of Term Costs set forth in such Operating Plan, the Committee may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 only to the extent that such actual cost exceeds 105 percent of the forecast for such activity or such project; provided, however, that, without limiting any of Puget's rights and benefits pursuant to section 16(f), no Initiating Party may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B,

lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 if such actual cost is less than 105 percent of the forecast for such activity or such project; and

- (6) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any issue, dispute, or controversy (A) concerning matters of ratemaking (for purposes of this subsection 15(a), the term "ratemaking" shall mean the determination of matters appropriately determined pursuant to section 7(i) of the Regional Act, including (i) Bonneville's revenue requirements (including without limitation Bonneville's depreciation and repayment standards and planned net revenues for risk, but excluding program level issues determined in the Federal budget process), (ii) Bonneville's cost of service analysis (including functionalization, segmentation, and allocation of costs contained in such analysis, but excluding any allocation of costs contemplated in Exhibit I), (iii) Bonneville's rate design, and (iv) any related environmental analysis of proposed rates; (B) concerning a final action of Bonneville, which final action is not itself performance of any obligation of Bonneville or Bonneville's Administrator under this Agreement; or (C) concerning, or requiring the decision of, a matter not arising under this Agreement or the other Capacity Ownership Agreements.
- (b) Except as otherwise provided in paragraph 15(a)(4), all arbitrations pursuant to this section 15 shall be between Bonneville and the Committee.
- (c) A copy of any submission (including, without limitation, any statement of position or any brief) by the Initiating Party or the Responding Party to the arbitrators pursuant to this section 15 shall be simultaneously served by such party on the Responding Party or Initiating Party, respectively. No submission by either the Initiating

Party or the Responding Party to the arbitrators shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Initiating Party or the Responding Party, and for good cause shown, the arbitrators may permit any submission by such party to exceed 50 pages.

- (d) With respect to any arbitration pursuant to this section 15 of any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) Only the Committee may initiate arbitration with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7. The Committee may initiate nonbinding arbitration pursuant to this section 15 by taking the following actions:
- (A) an affirmative vote to initiate arbitration pursuant to this section 15 by the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
- (B) either of the following:
- (i) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to this section 15 within the applicable time period set forth in subsection 13(h); or
- (ii) giving written notice to Bonneville of the Committee's decision to initiate arbitration



within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subparagraph 15(d)(1)(B) shall (x) indicate that such vote has been taken and (y) set forth in detail the matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (2) The respective rights and obligations of the Committee and of Bonneville with respect to arbitration pursuant to this subsection 15(d), unless otherwise provided in this subsection 15(d), shall be as set forth in subsections 14(d) through 14(l).
- (e) With respect to any arbitration pursuant to this section 15 of any issue, dispute, or controversy other than with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
  - (1) The party (which term, for purposes of this subsection 15(e), shall refer to Bonneville, on the one hand, and to the Committee or Puget, on the other) initiating arbitration (Initiating Party) shall initiate arbitration pursuant to this section 15 by serving written notice on the other party (Responding Party) of its initiation of arbitration. If the Committee is the party initiating arbitration, the Committee, in addition to serving such notice, shall initiate such arbitration by an affirmative vote to do so of at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one.

The Committee shall indicate that such vote has been taken in such notice to Bonneville. Any such notice by an Initiating Party shall set forth in detail the following: (A) the issue, dispute, or controversy to be arbitrated and the Initiating Party's position regarding such issue, dispute, or controversy; (B) the relief sought by the Initiating Party; and (C) the name, street address, and telephone number of the arbitrator appointed by the Initiating Party. The Responding Party shall, within 15 days after receipt of the notice by the Initiating Party referred to in this subsection 15(e), appoint a second arbitrator and provide written notice to the Initiating Party and to the arbitrator appointed by the Initiating Party of the name, street address and telephone number of the arbitrator appointed by the Responding Party. The arbitrators appointed by the Initiating Party and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party.

- (A) If the arbitrators appointed by the Initiating Party and by the Responding Party, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party, then within 30 days after the date of the appointment of an arbitrator by the Responding Party the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
- (B) If the Responding Party fails to appoint an arbitrator within 15 days after receipt of the notice by the Initiating Party referred to in paragraph 15(e)(1), then within 30 days after the date of such notice the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.

- (C) If, pursuant to either subparagraph 15(e)(1)(A) or 15(e)(1)(B), the Initiating Party applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Initiating Party shall give the Responding Party written notice of such application within one day after the date of filing such application.
- (2) The three arbitrators appointed pursuant to paragraph 15(e)(1) shall decide any issue, dispute, or controversy by majority vote.
- (3) Within 20 days after the appointment of a third arbitrator pursuant to paragraph 15(e)(1) with respect to any arbitration pursuant to this subsection 15(e), the arbitrators shall establish a schedule for the completion of such arbitration. The first day pursuant to such schedule shall be hereafter referred to in this subsection 15(e) as the "Arbitration Commencement Date."
- (4) No later than 15 days after the Arbitration Commencement Date, the Initiating Party may make a single request in writing to the Responding Party for documentation, data, and information relevant to or reasonably necessary to support the Initiating Party's position communicated to the Responding Party pursuant to paragraph 15(e)(1). Such single request may contain multiple parts. The Initiating Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information pursuant to this paragraph.
- (5) The Responding Party shall have 20 days from the date it receives the request from the Initiating Party pursuant to paragraph 15(e)(4) to provide the documentation, data, and information requested; provided, however, that the Responding Party shall be under no obligation pursuant to this paragraph 15(e)(5) (A) to create additional documentation, data, or

information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Initiating Party or (D) if Bonneville is the Responding Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (6) No later than 15 days after the Arbitration Commencement Date, the Responding Party may make a single request in writing to the Initiating Party for documentation, data and information relevant to Initiating Party's position communicated to the Responding Party pursuant to subsection 15(e)(4). Such single request may contain multiple parts. The Responding Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data and information pursuant to this paragraph.
- (7) The Initiating Party shall have 20 days from the date it receives the request from the Responding Party pursuant to paragraph 15(e)(6) to provide the documentation, data and information requested; provided, however, that the Initiating Party shall be under no obligation pursuant to this paragraph 15(e)(7) (A) to create additional documentation, data, or information, (B) to provide documentation, data or information that is not readily available to it, (C) to provide to the Responding Party documentation, data, or information that the Initiating Party has previously provided to the Responding Party or (D) if Bonneville is the Initiating Party, to provide documentation, data, or information that Bonneville would not

otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (8) For purposes of this subsection 15(e), each of the Initiating Party and the Responding Party shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests by it for, documentation, data, and information and responses to such requests.
- (9) Within 65 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may state in reasonable detail its position regarding any issue, dispute or controversy to be arbitrated pursuant to this subsection 15(e) in a letter to the arbitrators and to the other party to the arbitration of such issue, dispute, or controversy. Within 85 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may submit a letter to the arbitrators and to the other party responding to the letter that the other submitted to the arbitrators pursuant to the immediately preceding sentence.
- (10) The arbitrators shall resolve any issue, dispute, or controversy pursuant to this subsection 15(e) by deciding (taking into consideration, among other things, any letter submitted by the Initiating Party or the Responding Party with respect to such issue, dispute, or controversy) whether the position of the Initiating Party or the position of the Responding Party regarding the action taken or proposed to be taken by the Responding Party conforms more closely with the standard for such action set forth in this Agreement. The arbitrators shall have no authority to fashion a resolution of such arbitration other than pursuant to this paragraph 15(e)(10).

- (f) Any selection by the arbitrators of an alternative pursuant to subsection 15(d) and any decision by the arbitrators pursuant to subsection 15(e) shall be reported by the Initiating Party to the Bonneville Administrator (Administrator) for review within 30 days after such selection or decision is made. The Administrator shall either accept or reject in writing such selection or decision. If the Administrator fails to either accept or reject such selection or decision, as the case may be, within 90 days after such selection or decision is made, such selection or decision, as the case may be, shall be deemed to be accepted by the Administrator.
- (g) If the Administrator accepts any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e), such selection or decision shall become binding upon Puget and Bonneville at the time of its acceptance.
- (h) The Administrator may reject any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e) only for one or more of the following reasons:
- (1) the arbitrators did not follow the arbitration procedures set forth in this section 15;
  - (2) the arbitrators decided a matter that is not a matter arising under this Agreement as set forth in paragraph 15(a)(6);
  - (3) the arbitrators did not completely apply the appropriate standard for arbitration pursuant to this section 15;
  - (4) the arbitrators granted relief in contravention of this Agreement;

- (5) the arbitrators' decision is not supported by substantial, competent evidence; or
  - (6) implementation of the arbitrators' decision would cause Bonneville to violate a statutory obligation of Bonneville's or would cause Bonneville to breach a contractual obligation not in contravention of this Agreement.
- (i) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 15 equal to  $\frac{1}{1 + (n + 1)}$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay for its own expenses related to the arbitration proceeding, including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
- (j) If the Initiating Party elects to arbitrate any issue, dispute, or controversy pursuant to this section 15, the Initiating Party must initiate arbitration of such issue, dispute, or controversy within one year following the occurrence of the event giving rise to such issue, dispute, or controversy. Failure of the Initiating Party to initiate arbitration of any such issue, dispute, or controversy within such one-year period shall constitute a waiver of the Initiating Party's right to arbitrate such issue, dispute, or controversy pursuant to this section 15.

## 16. **AUDIT RIGHTS**

- (a) The Committee shall have the right to perform an audit of Bonneville's books, records, and documents used in or relating to the determination of the Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to the Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months

after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(2)(B).

- (b) The Committee shall have the right to perform an audit of Bonneville's books, records and documents used in or relating to the determination of any Revised Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to any Revised Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(3)(B).
- (c) The Committee shall have the right to audit Bonneville's books, records, and documents (i) used in or relating to the determination of any charge (including, without limitation, any MFU count made pursuant to section 1A of Exhibit I) billed to Puget pursuant to paragraph 9(b)(2) and subsection 9(c), or (ii) used in or relating to any billing or refund with respect to any such charge. Such audit shall be performed within 36 months after the date of Bonneville's bill or refund voucher for such charge rendered by Bonneville to Puget pursuant to paragraph 9(b)(2) or subsection 9(c), as the case may be.
- (d) Bonneville shall not be responsible to pay any of the expenses incurred by any of the Capacity Owners in performing any audit pursuant to this section 16. Bonneville shall not directly charge Puget or any Capacity Owner other than Puget for Bonneville's costs incurred by Bonneville with respect to any audit pursuant to this section 16 unless Bonneville develops a general practice of charging, through direct charges, each of its customers for such costs incurred by Bonneville in connection with audits undertaken pursuant to those customers' respective contracts with Bonneville.
- (e) After completing any audit specified above, the Committee shall promptly provide to Bonneville a written report of the results of such audit. If such audit report includes any exception taken as a result of such audit and Bonneville agrees with such exception, Bonneville



shall, within 30 days following Bonneville's receipt of such audit report and consistent with such audit exception,

- (1) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Puget a revised bill or refund voucher pursuant to paragraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
- (2) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and either (A) render to Puget a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (B) cause to be refunded to Puget as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Puget's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this subsection 16(e) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such audit report is received by Bonneville to (but excluding) the date on which such amount is refunded to Puget.

- (f) If an audit report provided to Bonneville by Puget pursuant to subsection 16(e) includes any exception taken as a result of such audit and Bonneville does not agree with such exception, then the following shall apply:
  - (1) Bonneville may, within 30 days following its receipt of such audit report, propose to the Committee a resolution of any

inconsistency noted in any exception taken as a result of such audit;

- (2) If the Committee accepts such resolution proposed by Bonneville, then Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such resolution,
  - (A) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Puget a revised bill or refund voucher pursuant to subparagraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
  - (B) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and shall either (i) render to Puget a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (ii) cause to be refunded to Puget as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Puget's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this paragraph 16(f)(2) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such resolution is accepted by the Committee to (but excluding) the date on which such amount is refunded to Puget; and

(3) If the Committee does not accept such resolution, if any, proposed by Bonneville with respect to any such exception, or if Bonneville does not propose any such resolution, then the Committee

(A) shall have the right to arbitrate, pursuant to section 14, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to subsection 13(i); and

(B) shall have the right to arbitrate, pursuant to section 15, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to section 15.

The Committee must refer to arbitration pursuant to subparagraph 16(f)(3)(A) or 16(f)(3)(B) any cost to which exception is taken as a result of any audit within eight months after the date the Committee commences such audit. Failure of the Committee to elect to so refer to arbitration any cost within such eight-month period shall be deemed to constitute waiver by the Committee of any right pursuant to this section 16 to arbitrate such cost.

(g) Puget shall have the right to participate in any audit pursuant to this section 16 only by acting through the Committee. If Puget chooses not to participate in any audit undertaken by the Committee, then Puget shall accept the findings of the Committee with respect to such audit and any resolution by the Committee and Bonneville of any inconsistency noted in any exception taken as a result of such audit.

(h) Any audits undertaken by the Committee shall be upon reasonable notice to Bonneville and at reasonable times and shall commence no more frequently than once in any 24 consecutive months. The audit rights provided in this section shall not be construed to permit a general audit of Bonneville's books, records, and documents. Audits shall be in conformance with generally accepted auditing standards.

Prior to and for the duration of any audit, Bonneville shall retain all pertinent books, records, and documents prepared in the normal course of business. After commencement of an audit pursuant to subsection 16(a), 16(b), or 16(c), the Committee may request and Bonneville shall promptly provide reasonably available supporting documentation for any cost or charge subject to audit. If the Committee fails to commence an audit pursuant to subsection 16(a), 16(b), or 16(c) within the time periods set forth in subsection 16(a), 16(b), or 16(c), such failure shall constitute waiver by Puget of any right pursuant to this section 16 to arbitrate any charge or refund billed or refunded by Bonneville.

- (i) If Puget is operating pursuant to paragraph 3(b)(1), Bonneville shall have the right, at its own expense, to review Puget's books, records, and documents that directly pertain to the revenue reportable in Puget's accounting system where revenues received for wheeling for other entities would be booked for the purpose of verifying compliance with paragraph 3(b)(1). Bonneville shall have the right to perform such audit no more frequently than once every 36 months.

#### **17. PROTECTED AREAS**

Puget shall not use its Scheduling Share for transmission of power on the PNW AC Intertie from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by Bonneville unless Puget is required by regulatory authority to purchase or provide transmission for the output of such project or unless Bonneville receives sufficient demonstration that a particular project would provide benefits to Bonneville's existing or planned fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program. The Parties agree that System Sales shall not be taken into consideration in any determination of whether Puget has used its Scheduling Share for transmission of power on the PNW AC Intertie from the hydroelectric projects referred to in the immediately preceding sentence. For purposes of this section 17, "System Sale" means any sale of power or energy to Puget or by a seller of power or energy, which power or energy is not

resource-specific and is delivered to Puget at a point that connects one or more resources or transmission systems.

**18. ESTABLISHMENT AND MAINTENANCE OF RATES AND RELIEF FROM REGULATORY ACTION**

- (a) Bonneville shall use good faith efforts to maintain in effect such of the following rates that has been approved by FERC on an interim or final basis, during the rate approval period established by FERC for such rate:
- (1) any rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date;
  - (2) the Initial Successor Rate;
  - (3) the Alternative Successor Rate; and
  - (4) the Bonneville Successor Rate.
- (b) If Bonneville's Administrator submits to FERC a rate that is different from that set forth in Exhibit B, Part A and Part B, on the Effective Date, as the first rate proposed by Bonneville (Initial Successor Rate) to replace the AC-93 rate set forth in Exhibit A or that is for a rate approval period which is less than the remainder of the Term following the expiration of the AC-93 rate, Puget may, within 90 days after Bonneville submits the Initial Successor Rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:
- (1) Puget may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or

(2) Puget may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Puget to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:

- (A) This Agreement shall terminate upon the date Bonneville receives Puget's notification to terminate this Agreement pursuant to this subsection 18(b) except for those rights and obligations set forth in this paragraph 18(b)(2).
- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Puget has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Puget's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + I = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Puget to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(b).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

I = Interest on A - ((B/540) X A), accruing from (and including) the date of Bonneville's receipt of Puget's Initial Lump Sum Payment to (but excluding) the date on which Bonneville receives Puget' notification to terminate this Agreement pursuant to this subsection 18(a), at the 5-year Treasury note rate in effect on the date on which Bonneville receives Puget's Initial Lump Sum Payment.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(b)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(b)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(b)(2)(B), Bonneville may accelerate payment to Puget of the amount of the Refunded Lump Sum Payment.

If Puget elects to proceed under this paragraph 18(b)(2), Bonneville shall not develop a rate or charge that would

inequitably allocate to Puget and Capacity Owners other than Puget, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Puget or any Capacity Owner other than Puget.

- (c) If FERC approves the Initial Successor Rate, the Alternative Successor Rate (as defined in subsection 18(d)), or the Bonneville Successor Rate (as defined in subsection 18(d)) for a term less than the remainder of the Term following the expiration of the AC-93 rate, and if Bonneville's Administrator thereafter submits to FERC a rate (Replacement Rate) that is different from the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis) or that is for a rate approval period which is less than the remainder of the Term following the expiration of the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis), Puget may, within 90 days after Bonneville submits such rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:
- (1) Puget may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
  - (2) Puget may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Puget to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:



- (A) This Agreement shall terminate upon the date Bonneville receives Puget's notification to terminate this Agreement pursuant to this subsection 18(c) except for those rights and obligations set forth in this paragraph 18(c)(2).
- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Puget has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Puget's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + R = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Puget to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement.

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

R = 2.5 times the amount paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the

immediately preceding fiscal year times the ratio of (a) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the first fiscal year during the proposed rate approval period pursuant to the rate submitted by Bonneville to FERC to replace the immediately preceding annual costs rate over (b) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the same fiscal year were the immediately preceding annual costs rate to remain in effect; provided, however, that the ratio of (a) over (b) shall in no event be less than one for purposes of this subsection.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(c)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(c)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(c)(2)(B), Bonneville may accelerate payment to Puget of the amount of Refunded Lump Sum Payment.

If Puget elects to proceed under this paragraph 18(c)(2), Bonneville shall not develop a special rate or charge that would inequitably allocate to Puget and Capacity Owners other than

Puget, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Puget or any Capacity Owner other than Puget.

The terms of this subsection 18(c) shall be effective through December 31, 2040.

- (d) If (i) FERC remands or approves a rate which materially differs from the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, or (ii) FERC grants final approval to a rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date, or to the Initial Successor Rate for a rate approval period of less than the remainder of the Term following the expiration of the AC-93 rate, or (iii) FERC remands or disapproves the Initial Successor Rate, then in any such event Bonneville, Puget, and Capacity Owners other than Puget shall use good faith efforts to develop an alternative successor rate (Alternative Successor Rate) which would place Puget in substantially the same position with respect to Puget's rights and obligations under this Agreement as if the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, had been approved by FERC for the remainder of the Term following the expiration of the AC-93 rate. Bonneville, Puget, and Capacity Owners other than Puget shall use good faith efforts to reach agreement on an Alternative Successor Rate within 6 months after the date of the FERC order regarding the Initial Successor Rate contemplated in this subsection 18(d) or within the time period established in such FERC order, whichever is earlier.
- (1) If Bonneville, Puget, and Capacity Owners other than Puget reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, then Bonneville shall, subject

to section 7(i) of the Regional Act, submit such Alternative Successor Rate to FERC for approval and confirmation.

- (2) If Bonneville, Puget, and Capacity Owners other than Puget do not reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, Bonneville shall develop a rate, which, among other things, in Bonneville's judgment, protects the rights and obligations of Puget and Capacity Owners other than Puget and, subject to section 7(i) of the Regional Act, shall submit such rate (Bonneville Successor Rate) to FERC for approval and confirmation.

Nothing in this subsection 18(d) shall limit or otherwise affect any provisions of subsection 18(b) or 18(c).

- (e) If Bonneville, Puget, and Capacity Owners other than Puget are unable to agree upon an Alternative Successor Rate pursuant to subsection 18(d), or if FERC approves the Alternative Successor Rate for a period of less than 15 years or with terms and conditions that differ from the terms and conditions of the Alternative Successor Rate, or if FERC remands the Alternative Successor Rate, or if FERC approves the Bonneville Successor Rate, Puget may elect, within 6 months of any of the foregoing events, to terminate this Agreement and execute a long-term contract with Bonneville for firm wheeling on the PNW-PSW Intertie for a term not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Puget's Capacity Ownership Share, pursuant to subsection 18(f).
- (f) Should Puget elect to proceed pursuant to paragraph 18(b)(1) or 18(c)(1) or subsection 18(e), the Parties shall take the following steps:
  - (1) Puget shall provide Bonneville with written notification of its election to terminate this Agreement and with a written request for a long-term contract for firm wheeling on the PNW-

PSW Intertie for a period not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Puget's Capacity Ownership Share.

- (2) As soon as practicable after receipt by Bonneville of the written notice sent pursuant to paragraph 18(f)(1), Bonneville shall offer to Puget a long-term contract for firm wheeling on the PNW-PSW Intertie of an amount of power equal to the amount of power specified in Puget's written request pursuant to paragraph 18(f)(1), such offered contract to contain other terms and conditions substantially similar to those then being offered by Bonneville to its other firm wheeling customers for transactions on the PNW-PSW Intertie.

The termination date of this Agreement shall be the same date as the effective date of the long-term contract for firm wheeling referred to in this paragraph 18(f)(2), and such date shall in any event be no more than 6 months after Bonneville's receipt of Puget's notification pursuant to paragraph 18(f)(1).

- (3) The long-term contract for firm wheeling offered to Puget pursuant to paragraph 18(f)(2) shall also contain provisions which:
- (A) Require Bonneville to credit or pay (any such payment to be made pursuant to paragraph 9(f)(4)), in equal monthly amounts during the term of such long-term contract for firm wheeling, against the amount payable by Puget to Bonneville pursuant to such long-term wheeling agreement an amount equal to the "Credited Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) = \text{Credited Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Puget to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(e).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

(B) Require Bonneville, subject to the immediately succeeding sentence, to credit or pay interest on the Credited Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest to be credited or paid pursuant to this provision shall be credited or paid by Bonneville on the amount of each monthly amount of the Credited Lump Sum Payment to be credited or paid by Bonneville pursuant to the provision set forth in subparagraph 18(f)(3)(A).

(C) Permit Bonneville to accelerate payment to Puget of the amount of Credited Lump Sum Payment which remains uncredited at any time during the term of such long-term contract for firm wheeling.

(g) Puget's right to terminate this Agreement pursuant to subsections 18(d) through 18(f) is a one-time only right that must be exercised after FERC action pursuant to subsection 18(d). If Puget fails to

terminate the Agreement pursuant to subsection 18(e) as prescribed therein as a result of FERC action, Puget shall have no future rights to terminate the Agreement under this section 18 as a result of FERC action.

- (h) Bonneville shall use best efforts to establish and maintain in effect the AC-93 rate, set forth in Exhibit A, during the remainder of the Term, but only until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), that is confirmed and approved by FERC on an interim or final basis, becomes effective. If FERC does not confirm and approve on a final basis the AC-93 rate for a rate approval period of sufficient duration so that the AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or such other rate, becomes effective, then upon expiration of the rate approval period of such AC-93 rate, Bonneville shall submit to FERC a rate based on the methodology used to determine the AC-93 rate (revised AC-93 rate) and shall use best efforts to obtain a rate approval period for the revised AC-93 rate of sufficient duration so that the revised AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), becomes effective. If, at any time during the Term, FERC does not confirm and approve on an interim or final basis the AC-93 rate or revised AC-93 rate for any reason other than the duration of the rate approval period, Bonneville and Puget shall use best efforts to develop a rate that would replace the AC-93 rate or revised AC-93 rate, and Bonneville shall submit such rate to FERC, pursuant to section 7(i) of the Regional Act, for confirmation and approval if such rate is agreed to by Bonneville, Puget and Capacity Owners other than Puget. If Bonneville and Puget do not succeed in developing such rate, Bonneville shall submit to FERC, pursuant to section 7(i) of the Regional Act, a rate which in Bonneville's judgment recovers Bonneville's costs. Bonneville shall bill Puget, and Puget shall pay Bonneville, in accordance with the AC-93 rate or, if FERC does not confirm and approve on an interim or final basis the AC-93 rate, the rate confirmed and approved by FERC on an interim or final basis.

Bonneville shall revise Exhibit A so that it contains, at a given time, the AC-93 or other rate confirmed and approved by FERC on an interim or final basis.

19. **EXHIBITS**

- (a) Exhibits A through J attached to this Agreement are by this reference made a part of this Agreement. In the event of a conflict between any provision in Exhibits A through J and the provisions of sections 1 through 23 of this Agreement, the provisions of sections 1 through 23 of this Agreement shall prevail.
- (b) Bonneville shall revise Exhibit A pursuant to subsections 18(g) and 18(h) and this subsection 19(b). The rate schedules attached hereto as Exhibit A have been conditionally or finally confirmed by FERC. If the final rate schedules which are approved by FERC are an amendment or modification of the initial rate schedules, the applicable amended or modified rate schedules and associated GTRSPs shall be attached to and made part of this Agreement effective as of the date specified in FERC's approval. The rate schedules and GTRSPs included in Exhibit A shall be replaced by successor rate schedules and provisions in accordance with the provisions of section 7(i) of the Regional Act and FERC rules.
- (c) Upon interim or final approval by FERC of any rate submitted to FERC pursuant to subsections 18(a) through 18(g), Bonneville shall revise Exhibit B so that Exhibit B contains such rate approved by FERC as contemplated in this subsection 19(c). For purposes of this Agreement, such rate shall be effective as of the date of effectiveness specified in FERC's approval of such rate. Subject to the provisions of subsections 18(a) through 18(g), the rate schedule set forth in Exhibit B, Part A and Part B, on the Effective Date, shall be replaced by successor rate schedules and provisions pursuant to section 7(i) of the Northwest Power Act and applicable FERC rules.



- (d) Bonneville shall revise or modify Exhibit C from time to time to reflect changes hereafter agreed to in writing by the Parties in Puget's Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share.
- (e) Bonneville shall revise Exhibit D pursuant to subsection 9(a). Revision or modification of Exhibit D shall not require an executed amendment or revision to this Agreement.
- (f) Not more frequently than annually, Bonneville shall review and, as appropriate, revise Exhibit E, Part A, in accordance with Bonneville's standard methodology and formula for calculation of average losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie. Such methodology and formula are intended to forecast average annual actual losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie Operational Transfer Capability. Any changes to the loss methodology or formula, other than numerical values, shall be made only after consultation with the Committee. During such consultation, Bonneville shall provide to the Committee material pertinent to such changes to the loss methodology or formula. Upon conclusion of any review of the loss factor in Exhibit E, Part A, Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan pursuant to section 13. If the Committee pursues arbitration pursuant to subsection 10(b) and section 14, Bonneville shall revise Exhibit E, Part A, to reflect the selection of the arbitrators pursuant to subsection 14(j).
- (g) Bonneville shall revise the loss factor in Exhibit E, Part B, as necessary to equal the same factor for average losses as Bonneville generally applies to transmission over Bonneville's share of the PNW-PSW Intertie. Revision of Exhibit E, Part B, shall not require an executed amendment or revision to this Agreement.
- (h) Bonneville shall revise Exhibit F as appropriate to reflect the facilities in Bonneville's PNW AC Intertie. Revision or modification of

Exhibit F shall not require an executed amendment or revision to this Agreement.

- (i) Bonneville shall revise Exhibit G as appropriate to reflect the complete list of all of the Capacity Owners and their respective Capacity Ownership Shares and Capacity Ownership Percentages from time to time pursuant to this Agreement.
- (j) Bonneville shall revise Exhibit H as appropriate to reflect all provisions required by statute or Executive Order. Revision or modification of Exhibit H shall not require an executed amendment or revision to this Agreement.
- (k) Bonneville shall revise Exhibit I to reflect changes as agreed to in writing by Puget and Capacity Owners other than Puget.
- (l) Bonneville shall revise Exhibit J as mutually agreed to in writing by the Parties.

20. **RULES OF LAW**

- (a) Bonneville and Puget agree that each fully participated in the drafting of each provision of this Agreement. The rule of law interpreting ambiguities against the drafting Party shall not be applicable to or utilized in resolving any dispute over the meaning or intent of this Agreement or any of its provisions.
- (b) This Agreement shall not be construed to establish a partnership, association, agency relationship, joint venture, or trust. Neither Party shall be under the control of or shall be or represent itself as, the agent of, or have a right or power to bind, the other Party without the other's express written consent, except as provided in this Agreement.
- (c) All applicable law is incorporated in and made part of this Agreement.

21. **NOTICES**

- (a) Unless the Agreement requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be served, given, or made if delivered in person or sent by acknowledged delivery, or sent by registered or certified mail, postage prepaid, to the persons addressed as set forth below:

**To Bonneville:**

**Group Vice President for Marketing, Conservation and Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232**

**To Puget:**

**Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515**

**To Seattle:**

**Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101**

**To PNGC:**

**Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232**

To Snohomish:  
Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201

To Tacoma:  
Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411

- (b) Either Party may, by written notice to the other Party pursuant to subsection 21(a), change the address set forth in subsection 21(a) for the notifying Party.
- (c) All notices pursuant to this Agreement shall be effective on the date of receipt.

**22. WAIVER**

Any waiver at any time by a Party of its rights with respect to any matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent or other matter. Except as otherwise provided herein or as agreed in writing by the Parties, no provision in this Agreement may be waived except as documented or confirmed in writing.

**23. MISCELLANEOUS**

**(a) Effect of Section Headings**

Section headings and subheadings appearing in this Agreement are inserted for convenience only and shall not be construed as interpretations of provisions of this Agreement.

(b) **Amendments**

Except as may be expressly otherwise provided in this Agreement, this Agreement may be amended only with the express written consent of both of the Parties, and no provision of this Agreement shall be varied or contradicted by any oral agreement, course of dealing or performance or any other matter not hereafter set forth in a written agreement signed by both of the Parties.

(c) **Entire Agreement**

This Agreement constitutes, on and as of the date hereof, the entire agreement of the Parties with respect to the subject matter of this Agreement, and all prior understandings or agreements, whether written or oral, between the Parties with respect to the subject matter of this Agreement are hereby superseded in their entirety.

(d) **No Third Party Beneficiaries**

There are no third party beneficiaries of this Agreement. This Agreement shall not be construed to create rights in, or to grant remedies to, any third party as a beneficiary of this Agreement or of any duty, obligation, or undertaking established herein.

(e) **Regulatory Approvals**

Each Party shall use its best efforts to obtain and maintain in effect regulatory approvals that are necessary to permit such Party to perform its obligations under this Agreement in accordance with its terms and conditions. Neither Party shall oppose in any way or seek to alter or amend the terms and conditions of this Agreement by application to or participation in any application of any regulatory authority or court having jurisdiction. Puget shall not oppose in any way or seek to alter or amend the terms or conditions of the annual costs rate set forth in Exhibit B, the CO-94 rate, the AC-93 rate, or

any rate described in section 18 that is agreed to by the Parties subsequent to each entering into this Agreement, in any proceeding pursuant to section 7 of the Pacific Northwest Electric Power Planning and Conservation Act before FERC or in any court of competent jurisdiction.

**(f) Other Capacity Ownership Agreements**

If Bonneville offers to enter into (i) a Capacity Ownership Agreement with any other Capacity Owner or (ii) any written amendment of any Capacity Ownership Agreement (other than this Agreement), then Bonneville shall offer to Puget an amendment of this Agreement that contains the terms and conditions of such Capacity Ownership Agreement with such other Capacity Owner or of such written amendment, as the case may be. Bonneville shall advise, and use reasonable efforts to consult with, Puget during the development or consideration of any offer to any Capacity Owner other than Puget to enter into a Capacity Ownership Agreement or any amendment of such agreement.

**(g) Singular and Plural Forms**

For purposes of interpreting and construing this Agreement, the singular form of a word shall include its plural and the plural form of a word shall include its singular, unless otherwise expressly provided by this Agreement.

**(h) Performance Pending Dispute**

Except as otherwise expressly provided in this Agreement, pending resolution of any dispute, issue, or controversy arising under this Agreement, the Parties shall each continue performance of their respective obligations pursuant to this Agreement.

(i) **Time Periods**

For purposes of calculating any time period prescribed by this Agreement, if the last day of the time period falls on a day that is not a Working Day, then the last day of the time period shall be the first Working Day following such day as would otherwise be the last day of the time period.

(j) **Double Counting**

In developing rates or charges under section 7 of the Pacific Northwest Electric Power Planning and Conservation Act for any rate period, Bonneville shall not set rates or charges that recover, more than once, the costs associated with capital projects that are paid or forecast to be paid under the CO-94 rate and the AC-93 rate and annual costs rate set forth in Exhibit B, or the remaining Bonneville's PNW AC Intertie costs forecast to be paid under the AC-93 rate and annual costs rate set forth in Exhibit B. Bonneville's forecast of revenues chargeable under the CO-94 rate, AC-93 rate, and annual costs rate set forth in Exhibit B shall be based on the best available information, including information provided pursuant to section 13 of this Agreement.

In the event Bonneville proposes any wheeling rate for transmission service on Bonneville's main grid that includes costs of the PNW AC Intertie, such proposed rate shall include a credit or other mechanism that ensures that Puget is not charged any of the PNW AC Intertie costs for deliveries of power that utilize up to the Puget's Capacity Ownership Share, as that term is defined in this Agreement.

(k) **Committee Action**

Each of the Parties agrees that to the extent it is provided in sections 13, 14, and 16 that the Committee shall take any action or shall make any decision, such action or decision shall be taken or made, as the case may be, by the Committee, and not by Puget acting individually.

(l) **Fiscal Year**

For purposes of this Agreement, the term "fiscal year" shall mean Bonneville's fiscal year.

(m) **Rights and Remedies Cumulative**

All rights and remedies of either Party under this Agreement and at law and in equity shall be cumulative and not mutually exclusive and the exercise of one right or remedy shall not be deemed a waiver of any other right or remedy. Nothing contained in any provision of this Agreement shall be construed to limit or exclude any right or remedy of either Party (arising on account of the breach or default by the other Party or otherwise) now or hereafter existing under any other provision of this Agreement, at law or in equity.



IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

/s/ WALTER E. POLLOCK  
Group Vice President for Marketing,  
Conservation and Production

By Walter E. Pollock  
Group Vice President for Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

October 11, 1994

Date October 11, 1994

Puget Sound Power & Light Company

By J.R. Lauckhart  
Name J.R. Lauckhart  
(Print/Type)

/s/ J. R. LAUCKHART

Title VP Power Planning

Vice President, Power Planning

Date 9/26/94

September 26, 1994

Effective Date \_\_\_\_\_

Exhibit A, Page 1 of 1  
Contract No. DE-MS79-94BP94521  
Puget Sound Power & Light Company  
Effective on the Effective Date

**CO-94, AC-93, IS-93 Rate Schedules and General Transmission  
Rate Schedule Provisions**

Schedule CO-94  
**CAPACITY OWNERSHIP RATE SCHEDULE**

**Section I. Availability**

This schedule applies to all agreements which provide life-of-facilities capacity rights to non-Federal participants (Capacity Owners) in 725 MW of Bonneville's PNW AC Intertie and any upgrades thereto. Service under this schedule is subject to Bonneville's General Transmission Rate Schedule Provisions.

**Section II. Rate**

The charge for capital and related costs for non-Federal capacity ownership in Bonneville's PNW AC Intertie shall be determined by the methodologies set out in Section III below.

**Section III. Determination of Rate**

**A. Capacity Ownership Price**

The charge for capacity ownership in Bonneville's PNW AC Intertie shall be the Capacity Ownership Share of the actual capital and related costs of facilities as determined by the formula shown below. The Capacity Ownership Share shall be determined pursuant to the Capacity Ownership agreement.

$$\frac{(A - B) + C + D}{E} = \text{Capacity Ownership Price in } \$/\text{kW}$$

Capacity Ownership Price in \$/kW x number of kW contracted for by Capacity Owner = Capacity Owner's payment to Bonneville

Where:

**A =** Bonneville's cost of new facilities for the Third AC Intertie, which increased the transfer capability of the PNW AC Intertie by approximately 1600 MW, is the construction costs (including direct, indirect and overhead costs) of the facilities associated with the Third AC Intertie System Reinforcements and the Alvey-Merid

Transmission Line ( also known as Eugene-Medford 500-kV Transmission Line), referred to jointly as the Third AC Intertie Project.

- B = Bonneville's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project, which includes a portion of the construction costs (including direct, indirect and overhead costs) associated with the Third AC Intertie System Reinforcement.
- A-B = The cost of new facilities for the second 800 MW increment of the 1600 MW Third AC Intertie Project (presented in Exhibit C of the Capacity Ownership agreement).
- C = Allowance for Funds Used During Construction (AFUDC) constitutes interest on the funds used for the Third AC Intertie Project while it was under construction. AFUDC is calculated and capitalized consistent with FERC requirements as described in FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions, 3.A(17). The AFUDC applies to that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.
- D = Book value of existing Bonneville support facilities that are dedicated to the PNW AC Intertie equal to \$19,100,000.
- E = 725,000 kW, which equals Bonneville's share of the second 800 MW of the Third AC Intertie.

**B. PNW AC Intertie Upgrade Price**

The charge for upgrades to Bonneville's PNW AC Intertie facilities that occur after December 1993, and which result in an increase of rated transfer capability, shall be the Capacity Ownership Share of the capital and related costs of the upgrade. The Capacity Ownership Share of any upgrades shall be determined pursuant to the Capacity Ownership agreement. The capital costs shall consist of the construction costs (including direct, indirect and overhead costs) and AFUDC (as described in Section III.A. above) of the facilities associated with such upgrades.

#### **Section IV. Adjustments and Special Provisions**

##### **A. Initial Lump Sum Payment**

Capacity Owners shall make an initial, lump sum payment of an estimate of the Capacity Ownership Price equal to \$215/kW pursuant to the Capacity Ownership agreement.

##### **B. Adjustment to Reflect Actual Construction Costs**

Approximately December 1995 or as soon as practicable thereafter, the Capacity Owner's initial lump sum payment shall be adjusted to reflect the difference between the actual and the estimated Capacity Ownership Price. The actual Capacity Ownership Price shall be determined pursuant to Section III.A. above. There will be no adjustment for the book value of the support facilities dedicated to the PNW AC Intertie. Capacity Owners will either receive a refund, with interest, from Bonneville or make an additional payment, with interest, to Bonneville. Bonneville shall compute interest using the weighted average interest rate on Bonneville's outstanding bonds.

##### **C. PNW AC Intertie Upgrade Payments**

Capacity Owners shall pay a share of the upgrades to Bonneville's PNW AC Intertie in the manner and time to be determined when participation in such upgrades are agreed to pursuant to the Capacity Ownership agreement.

Schedule AC-93  
Southern Intertie Annual Cost

SECTION I. AVAILABILITY

This schedule is applicable to all parties (New Owners) that execute PNW AC Intertie Capacity Ownership Agreements (Agreements) and will be effective on the date described in the Agreement. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

The rate charges reflect the terms of the Memorandum of Understanding (MOU), signed in the Fall of 1991, between BPA and potential New Owners. The MOU provides for the payment by New Owners of their prorated share of: (1) BPA's annual operations, maintenance, and general plant expense (including applicable overheads) properly chargeable to the AC Intertie facilities; and (2) BPA's share of capitalized replacements on the AC Intertie. The monthly charge shall be the sum of the charges specified in sections II.A and II.B.

A. Operations, Maintenance, and General Plant

The monthly charge shall equal \$325 per megawatt of billing demand.

B. Replacements

The monthly charge shall equal \$0 per megawatt of billing demand.

SECTION III. ADJUSTMENT TO REPLACEMENTS RATE

A. Determination of Billing Adjustment

New Owners will receive a billing adjustment if BPA incurs AC Intertie replacement cost during the rate period. The Replacements Rate Adjustment equals:

$$\frac{\text{AC Intertie work orders (\$(XX))} \cdot \%}{725 \text{ MW} \cdot \# \text{ months}}$$

where:

"# months" equals: (1) the number of months that this rate schedule is in effect during the fiscal year for the Initial Replacements Rate Adjustment; or (2) the number of months in the rate period for the Final Replacements Rate Adjustment; and

"%" equals the New Owners' percentage share of BPA's total AC Intertie Rated Transfer Capability as specified in the Agreements.

B. Initial Replacements Rate Adjustment

New Owners will receive a billing adjustment for each fiscal year that BPA incurs AC Intertie replacement cost. At the end of each fiscal year, the cost associated with AC Intertie capital replacement work orders that have closed during the fiscal year will be determined. The unit rate that would result using these closed work orders is the basis of the Initial Replacements Rate Adjustment.

1. Notice Provisions

Following each fiscal year, BPA shall notify all New Owners by December 15 of the proposed Replacements Rate Adjustment. BPA will provide the calculation of the adjustment and a short description of the work performed and the associated cost used as the basis for the billing adjustment. In addition to written notification, BPA may, but is not obligated to, hold a public meeting to clarify its determinations.

Schedule AC-93  
(Continued)

Written comments on the Initial Replacements Rate Adjustment will be accepted through the end of January. Consideration of comments submitted by the New Owners may result in the billing adjustment differing from the initially proposed adjustment. BPA shall notify all New Owners of the Initial Replacements Rate Adjustment by the last day of February.

2. Adjustment of Monthly Bills

An adjustment will be made on the New Owner's monthly bill prepared during March. The Initial Replacements Rate adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal year (i.e., the New Owner's share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal year). The Initial Replacements Rate Adjustment will appear as a charge to the New Owner on the monthly bill prepared during March.

C. Final Replacements Rate Adjustment

The actual costs associated with the AC Intertie capital replacement work orders that occur during the rate period may change after BPA performs its final analysis of the work orders. BPA shall compare the unit rate for the rate period using the results of the final work order analysis to the weighted average of the unit rates from the Initial Replacements Rate Adjustments.

1. Notice Provisions

BPA shall notify all New Owners in May 1998 of the results of the calculations, an explanation of work

order change(s), and any resulting billing adjustment. Written comments from New Owners will be accepted through the end of June. BPA shall notify all New Owners of the Final Replacements Rate Adjustment by July 31. Consideration of comments submitted by the New Owners may result in the Final Replacements Rate Adjustment differing from the initially proposed adjustment.

2. Adjustment of Monthly Bills

If the absolute value of the Final Replacements Rate Adjustment is greater than or equal to \$1 per megawatt per month, an adjustment will be made on the New Owner's monthly bill prepared during August. For each New Owner, the Final Replacements Rate Adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal years (i.e., the New Owner's share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal years). The Final Replacements Rate Adjustment will appear as a charge or credit to the New Owner on the monthly bill prepared during August. Interest, as determined by BPA's Office of Financial Management, will be included in any adjustment.

SECTION IV. BILLING FACTOR

The billing demand shall be the New Owner's capacity ownership share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability as specified in the Agreement.

Schedule IS-93  
Southern Intertie Transmission

**SECTION I. AVAILABILITY**

This schedule supersedes IS-91 and is available for all transmission on the Southern Intertie. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

**SECTION II. RATE**

**A. Nonfirm Transmission Rate**

The charge for nonfirm transmission of non-BPA power shall be 3.11 mills per kilowatt-hour of billing energy. This charge applies for both north-to-south and south-to-north transactions.

**B. Firm Transmission Rate**

The charge for firm transmission service shall be \$0.706 per kilowatt per month of billing demand and 1.69 mills per kilowatt-hour of billing energy. Firm transmission will only be made available to customers under this rate schedule who have executed a contract with BPA specifying use of the Firm Transmission rate for either north-to-south or south-to-north transactions.

**SECTION III. BILLING FACTORS**

- A. For services under Section II.A, the billing energy shall be the monthly sum of the scheduled kilowatt-hours, plus the monthly sum of kilowatt-hours allocated but not scheduled. The amount of allocated but not scheduled energy that is subject to billing may be reduced pro rata by BPA due to forced Intertie outages and other uncontrollable forces that may reduce Intertie capacity. The amount of allocated but not scheduled energy that is subject to billing

also may be reduced upon mutual agreement between BPA and the customer.

- B. For services under Section II.B, the billing demand shall be the Transmission Demand as defined in the Agreement. The billing energy shall be the monthly sum of scheduled kilowatt-hours, unless otherwise specified in the Agreement.



## General Transmission Rate Schedule Provisions

### SECTION I. ADOPTION OF REVISED TRANSMISSION RATE SCHEDULES AND GENERAL TRANSMISSION RATE SCHEDULE PROVISIONS (GTRSPs)

#### A. Approval of Rates

These rate schedules and GTRSPs shall become effective upon interim approval or upon final confirmation and approval by FERC. BPA will request FERC approval effective October 1, 1993.

#### B. General Provisions

These 1993 Transmission Rate Schedules and associated GTRSPs are virtually identical to and supersede BPA's 1991 Transmission Rate Schedules and GTRSPs (which became effective October 1, 1991) but do not supersede prior rate schedules required by agreement to remain in force.

Transmission service provided shall be subject to the following Acts, as amended: the Bonneville Project Act, the Regional Preference Act (P.L. 88-552), the Federal Columbia River Transmission System Act, and the Pacific Northwest Electric Power Planning and Conservation Act, and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992).

The meaning of terms used in the transmission rate schedules shall be as defined in agreements or provisions which are attached to the Agreement or as in any of the above Acts.

#### C. Interpretation

If a provision in the executed Agreement is in conflict with a provision contained herein, the former shall prevail.

### SECTION II. BILLING FACTOR DEFINITIONS AND BILLING ADJUSTMENTS

#### A. Billing Factors

##### 1. Scheduled Demand

The largest of hourly amounts wheeled which are scheduled by the customer during the time period specified in the rate schedules.

##### 2. Metered Demand

The Metered Demand in kilowatts shall be the largest of the 60-minute clock-hour integrated demands measured by meters installed at each POD during each time period specified in the applicable rate schedule. Such measurements shall be made as specified in the Agreement. BPA, in determining the Metered Demand, will exclude any abnormal readings due to or resulting from: (a) emergencies or breakdowns on, or maintenance of, the FCRTS; or (b) emergencies on the customer's facilities, provided that such facilities have been adequately maintained and prudently operated as determined by BPA. If more than one class of power is delivered to any POD, the portion of the metered quantities assigned to any class of power shall be as agreed to by the parties. The amount so assigned shall constitute the Metered Demand for such class of power.

3. Transmission Demand

The demand as defined in the Agreement.

4. Total Transmission Demand

The sum of the transmission demands as defined in the Agreement.

5. Ratchet Demand

The maximum demand established during the previous 11 billing months. Exception: If a Transmission Demand or Total Transmission Demand has been decreased pursuant to the terms of the Agreement during the previous 11 billing months, such decrease will be reflected in determining the Ratchet Demand.

B. Billing Adjustments

Average Power Factor

The adjustment for average power factor, when specified in a transmission rate schedule or in the Agreement, shall be made in accordance with the average power factor section of the General Wheeling Provisions.

To maintain acceptable operating conditions on the Federal system, BPA may restrict deliveries of power at any time that the average leading power factor or average lagging power factor for all classes of power delivered to such point or to such system is below 85 percent.

SECTION III. OTHER DEFINITIONS

Definitions of the terms below shall be applied to these provisions and the Transmission Rate Schedules, unless otherwise defined in the Agreement.

A. Agreement

An agreement between BPA and a customer to which these rate schedules and provisions may be applied.

B. Eastern Intertie

The segment of the FCRTS for which the transmission facilities consist of the Townsend-Garrison double-circuit 500 kV transmission line segment including related terminals at Garrison.

C. Electric Power

Electric peaking capacity (kW) and/or electric energy (kWh).

D. Federal Columbia River Transmission System

The transmission facilities of the Federal Columbia River Power System, which include all transmission facilities owned by the government and operated by BPA, and other facilities over which BPA has obtained transmission rights.

E. Firm Transmission Service

Transmission service which BPA provides for any non-BPA power except for transmission service which is scheduled as nonfirm. If the firm service is provided pursuant to the Agreement, the terms of the Agreement may further define the service.

F. Integrated Network

The segment of the FCRTS for which the transmission facilities provide the bulk of transmission of electric power within the Pacific Northwest, excluding facilities not segmented to the network as shown in the Wholesale Power Rate Development Study used in BPA's rate development.

**G. Main Grid**

As used in the FPT and IR rate schedules, that portion of the Integrated Network with facilities rated 230 kV and higher.

**H. Main Grid Distance**

As used in the FPT rate schedules, the distance in airline miles on the Main Grid between the POI and the POD, multiplied by 1.15.

**I. Main Grid Interconnection Terminal**

As used in the FPT rate schedules, Main Grid terminal facilities that interconnect the FCRTS with non-BPA facilities.

**J. Main Grid Miscellaneous Facilities**

As used in the FPT rate schedules, switching, transformation, and other facilities of the Main Grid not included in other components.

**K. Main Grid Terminal**

As used in the FPT rate schedules, the Main Grid terminal facilities located at the sending and/or receiving end of a line exclusive of the interconnection terminals.

**L. Nonfirm Transmission Service**

Interruptible transmission service which BPA may provide for non-BPA power.

**M. Northern Intertie**

The segment of the FCRTS for which the transmission facilities consist of two 500 kV lines between Custer Substation and the United States-Canadian border, one 500 kV line between Custer and Monroe Substations, and two 230 kV lines from Boundary Substation to the United States-Canadian border, and the associated substation facilities.

**N. Point of Integration (POI)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is made available to BPA for wheeling.

**O. Point of Delivery (POD)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is delivered to a customer by BPA.

**P. Secondary System**

As used in the FPT and IR rate schedules, that portion of the Integrated Network facilities with operating voltage of 115 kV or 69 kV.

**Q. Secondary System Distance**

As used in the FPT rate schedules, the number of circuit miles of Secondary System transmission lines between the secondary POI and the Main Grid or the secondary POD, or the Main Grid and the secondary POD.

**R. Secondary System Interconnection Terminal**

As used in the FPT rate schedules, the terminal facilities on the Secondary System that interconnect the FCRTS with non-BPA facilities.

**S. Secondary System Intermediate Terminal**

As used in the FPT rate schedules, the first and final terminal facilities in the Secondary System transmission path exclusive of the Secondary System Interconnection terminals.

**T. Secondary Transformation**

As used in the FPT rate schedules, transformation from Main Grid to Secondary System facilities.

#### U. Southern Intertie

The segment of the FCRTS for which the major transmission facilities consist of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; when completed, the Third AC facilities, which include Captain Jack Substation and the Alvey-Meridian 500 kV AC line; one 1,000 kV DC line between the Cellilo Substation and the Oregon-Nevada border; and associated substation facilities.

#### V. Transmission Service

As used in the MT rate schedule, Transmission Service is as defined in the Western Systems Power Pool Agreement.

### SECTION IV. BILLING INFORMATION

#### A. Payment of Bills

Bills for transmission service shall be rendered monthly by BPA. Failure to receive a bill shall not release the customer from liability for payment. Bills for amounts due of \$50,000 or more must be paid by direct wire transfer; customers who expect that their average monthly bill will not exceed \$50,000 and who expect special difficulties in meeting this requirement may request, and BPA may approve, an exemption from this requirement. Bills for amounts due BPA under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by BPA. The procedures to be followed in making direct wire transfers will be provided by the Office of Financial Management and updated as necessary.

##### 1. Computation of Bills

The transmission billing determinant is the electric power quantified by the

method specified in the Agreement or Transmission Rate Schedule. Scheduled power or metered power will be used.

The transmission customer shall provide necessary information to BPA for any computation required to determine the proper charges for use of the FCRTS, and shall cooperate with BPA in the exchange of additional information which may be reasonably useful for respective operations.

Demand and energy billings for transmission service under each applicable rate schedule shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents through 99 cents to the next higher dollar.

##### 2. Estimated Bills

At its option, BPA may elect to render an estimated bill to be followed at a subsequent billing date by a final bill. The estimated bill shall have the validity of and be subject to the same payment provisions as a final bill.

##### 3. Billing Month

For charges based on scheduled quantities, the billing month is the calendar month. For charges based on metered quantities, the billing month is defined as the interval between scheduled meter-reading dates. The billing month will not exceed 31 days in any case. While it may be necessary to read meters on a day other than the scheduled meter-reading date, for determination of billing demand, the billing month will cease at 2400 hours on the last scheduled meter-reading date. Schedules will be predetermined. The customer must give 30 days notice to request a change to the schedule.

4. Due Date

Bills shall be due by close of business on the 20th day after the date of the bill (due date). Should the 20th day be a Saturday, Sunday, or holiday (as celebrated by the customer), the due date shall be the next following business day.

5. Late Payment

Bills not paid in full on or before close of business on the due date shall be subject to a penalty charge of \$25. In addition, an interest charge of one-twentieth percent (0.05 percent) shall be applied each day to the sum of the unpaid amount and the penalty charge. This interest charge shall be assessed on a daily basis until such time as the unpaid amount and penalty charge are paid in full.

Remittances received by mail will be accepted without assessment of the charges referred to in the preceding paragraph provided the postmark indicates the payment was mailed on or before the due date. Whenever a power bill or a portion thereof remains unpaid subsequent to the due date and after giving 30 days' advance notice in writing, BPA may cancel the contract for service to the customer. However, such cancellation shall not affect the customer's liability for any charges accrued prior thereto under such agreement.

6. Disputed Billings

In the event of a disputed billing, full payment shall be rendered to BPA and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified above. BPA shall separately account for the disputed amount. If it is determined that the customer is entitled to the disputed

amount, BPA shall refund the disputed amount with interest, as determined by BPA's Office of Financial Management.

BPA retains the right to verify, in a manner satisfactory to the Administrator, all data submitted to BPA for use in the calculation of BPA's rates and corresponding rate adjustments. BPA also retains the right to deny eligibility for any BPA rate or corresponding rate adjustment until all submitted data have been accepted by BPA as complete, accurate, and appropriate for the rate or adjustment under consideration.

7. Revised Bills

As necessary, BPA may render a revised bill.

- a. If the amount of the revised bill is less than or equal to the amount of the original bill, the revised bill shall replace all previous bills issued by BPA that pertain to the specified customer for the specified billing period and the revised bill shall have the same date as the replaced bill.
- b. If a revision causes an additional amount to be due BPA or the specified customer beyond the amount of the original bill, a revised bill will be issued for the difference and the date of the revised bill shall be its date of issue.

## Annual Costs Rate

### A. PROPOSED SOUTHERN INTERTIE ANNUAL COST RATE

#### SECTION I. AVAILABILITY

This schedule is applicable to each party (Capacity Owner) that executes a PNW AC Intertie Capacity Ownership Agreement (Agreement). Billings pursuant to this schedule is subject to the Billing Provisions in Exhibit B of the Agreement. This rate schedule shall be effective on the first day of the fiscal year following the earlier of interim or final FERC approval of this rate schedule. Unless otherwise defined in this rate schedule, capitalized terms used in this rate schedule shall have the respective definitions set forth in section 1 of this Agreement.

#### SECTION II. RATE

##### A. Operations

The monthly charge equals:

$$\frac{\text{Operations Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Operations Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the Operations rate shall be calculated using the forecast Operations Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is

amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Operations Cost shall be calculated using the forecast Operations Cost less the Operations Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **B. Maintenance**

The monthly charge equals:

$$\frac{\text{Maintenance Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Maintenance Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Maintenance Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville’s PNW AC Intertie, maintenance Indirect Costs for Bonneville’s PNW AC Intertie, and maintenance Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Maintenance rate shall be calculated using the forecast Maintenance Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Maintenance Cost shall be calculated using the forecast Maintenance Cost less the Maintenance Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **C. General Plant**

The monthly charge equals:

$$\frac{\text{General Plant Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to General Plant Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the General Plant rate shall be calculated using the General Plant Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for General Plant Cost shall be calculated using the General Plant Cost less the General Plant Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### D. Other Costs

The monthly charge equals:

$$\frac{\text{Other Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Other Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.



The monthly charge for the Other Costs rate shall be calculated using the forecast Other Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Other Costs shall be calculated using the forecast Other Costs less the Other Costs already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

**E. Contracts and Rates**

The monthly charge equals:

$$\frac{\text{Contracts and Rates Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Contracts and Rates Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Contracts and Rates Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville’s total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Contracts and Rates Cost is determined in accordance with section VI of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Contracts and Rates Cost determined in accordance with section VI of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Contracts and Rates rate shall be calculated using the forecast Contracts and Rates Costs in the Operating Plan in effect during the

month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Contracts and Rates Cost shall be calculated using the forecast Contracts and Rates Cost less the Contracts and Rates Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **F. Power Scheduling**

The monthly charge equals:

$$\frac{\text{Power Scheduling Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Power Scheduling Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Power Scheduling Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Power Scheduling Cost is determined in accordance with section VII of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Power Scheduling Cost determined in accordance with section VII of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Power Scheduling rate shall be calculated using the forecast Power Scheduling Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan

pertains, the monthly charge for Power Scheduling Cost shall be calculated using the forecast Power Scheduling Cost less the Power Scheduling Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **G. End of Term**

The monthly charge shall equal:

$$\frac{\text{End of Term Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to End of Term Costs, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“End of Term Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the End of Term rate shall be calculated using the forecast End of Term Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for End of Term Costs shall be calculated using the forecast End of Term Costs less the End of Term Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **H. Replacements and Reinforcements**

1. For each Replacement, the charge equals:

$$\text{Replacement Cost} * \text{Capacity Ownership Percentage}$$

2. For each Reinforcement, the charge equals:

$$\text{Reinforcement Cost} * \text{Capacity Ownership Percentage}$$

Where

"Replacement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Replacement Cost does not include capitalized general plant cost. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Reinforcement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Reinforcement Cost does not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The charge for the Replacements and Reinforcements rate shall use the actual Replacement Cost and Reinforcement Cost in the Operating Plan.

### **SECTION III. ADJUSTMENTS**

If an amendment to the Operating Plan results in a net amount that Bonneville owes the Capacity Owners pursuant to sections II.A-G or pursuant to section II.H, Bonneville shall refund such net amount pursuant to paragraph 9(f)(4) of the Agreement.

The monthly charges assessed Capacity Owners under sections II.A-G shall be adjusted, and payment or refund made with interest, pursuant to paragraphs 9(b)(2) or 9(f)(4) of the Agreement, to reflect amendments to the Operating Plan that occur after the year to which such Operating Plan pertains.

A Capacity Owner's share of the adjustment shall be determined using the same Capacity Ownership Percentage used in the billings under sections II.A-G during the fiscal year that such Operating Plan is effective.

**B. BILLING PROVISIONS**

**I. General Provisions**

**A. Approval of Rates**

The annual costs rate shall become effective upon interim approval or upon final confirmation and approval by FERC. Bonneville will request FERC approval of such rate schedule effective on the first day of a Bonneville fiscal year.

**B. Application of Billing Provisions**

These Billing Provisions shall apply to bills rendered by Bonneville pursuant to the annual costs rate.

**C. Definition of Terms**

The meaning of terms used in the AC-95 rate shall be as defined in the Agreement or, if no definition is provided by the Agreement, such terms shall be defined according to applicable Federal law.

**II Billing Information**

**Payment of Bills**

Charges pursuant to the AC-95 rate shall be included in Bonneville's monthly power bill to Capacity Owner. Failure to receive a power bill shall not release Capacity Owner from liability for payment. Power bills for amounts due of \$50,000 or more must be paid by direct wire transfer. If Capacity Owner anticipates special difficulties in meeting this requirement, Capacity Owner may request and Bonneville may approve an exemption from this requirement. Power bills for amounts due Bonneville under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by Bonneville. The procedures to be followed in making direct wire transfers will be provided by Bonneville's Financial Services Group and updated as necessary.

**(1) Computation of Bills**

**(a) Bonneville shall bill Capacity Owner in accordance with the annual costs rate.**

(b) Capacity Owner shall provide necessary information to Bonneville for any computation required to determine proper charges pursuant to the Agreement and shall cooperate with Bonneville in the exchange of additional information which may be reasonably useful for respective operations.

(c) Bills rendered pursuant to this Agreement shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents to 99 cents to the next higher whole dollar.

(2) Billing Month

For charges pursuant to the annual costs rate the billing month shall be the same as for the power bill rendered by Bonneville to Capacity Owner.

(3) Due Date

Charges pursuant to the annual costs rate shall be included in the power bill rendered by Bonneville to Capacity Owner and shall be due as part of the power bill when such power bill is due.

(4) Late Payment

The penalties for failure to pay a bill in full on or before close of business on the due date shall be the same as those contained in the late payment provisions in Bonneville's General Transmission Rate Schedule Provisions in effect on the date of the bill; provided, however, that no other provision of any such General Transmission Rate Schedule Provisions, including, but not limited to, provisions regarding cancellation, termination, or suspension of service, shall have application with respect to the payment of any rate or charge pursuant to the annual costs rate set forth in Exhibit B. Bonneville's right to suspend service for late payment under the Agreement shall be pursuant to paragraph 9(e)(1) of this Agreement, which right shall in no way be limited by this section.

(5) Disputed Bills

In the event of a disputed bill, full payment shall be rendered to Bonneville and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified in section II(4) of the Billing Provisions of this Exhibit B. Bonneville shall separately account for the disputed amount. If it is determined that Capacity Owner is entitled to the disputed amount, Bonneville shall refund the disputed amount with interest, such interest to

be determined by Bonneville's Financial Services Group. In the event that Bonneville and Capacity Owner do not resolve such dispute, Capacity Owner shall not be prevented by this section II(5) of the Billing Provisions of this Exhibit B from initiating arbitration pursuant to and to the extent allowed by section 15 of this Agreement.

**(6) Revised Bills**

If Bonneville determines that it has over- or under-charged Capacity Owner due to a computational error or pursuant to an amendment to the Operating Plan in any given billing month, Bonneville may render to Capacity Owner a revised bill.

(i) If the amount of the revised bill is less than or equal to the amount of the original bill for such billing month, the revised bill shall replace the original bill issued by Bonneville. The revised bill shall have the same date as the original bill.

(ii) If the amount of the revised bill is greater than the amount of the original bill for such billing month, a new bill will be issued for the difference between the revised bill and the original bill. The date of the new bill shall be its date of issuance, and Capacity Owner shall make payment to Bonneville as specified in the Billing Provisions of this Exhibit B.



**Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share**

Capacity Ownership Share = 400 MW

Capacity Ownership Percentage =  $\text{Capacity Ownership Share} \div \text{Bonneville's PNW AC Intertie Rated Transfer Capability}^1$

Scheduling Percentage =  $\text{Capacity Ownership Share} \div \text{PNW AC Intertie Rated Transfer Capability}$

Scheduling Share =  $\text{Scheduling Percentage} \times \text{PNW AC Intertie Operational Transfer Capability}$

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1/ As of the Effective Date, Bonneville's PNW AC Intertie Rated Transfer Capability in a north-to-south direction, calculated in accordance with the Northwest Intertie Agreements equals 3450 MW (total PNW AC Intertie Rated Transfer Capability (4800 MW) – Portland's PNW AC Intertie Rated Transfer Capability (950 MW) – PacifiCorp's PNW AC Intertie Rated Transfer Capability (400 MW)).

**Lump Sum Payment Calculation**

**A. SECOND 800 MW COSTS, ESTIMATED<sup>1</sup>, ACTUAL<sup>2</sup>, AND REVISED ACTUAL<sup>3</sup>**

	(\$ in Thousands)		
<u>Facilities whose costs will be adjusted using change Between Estimate and Actual</u>	(1) BPA's Costs <u>Estimated</u>	(2) BPA's Costs <u>Actual</u>	BPA's Costs <u>Revised Actual</u>
1. Alvey (Marion-Alvey Caps)	\$5,739		
2. Slatt (Loop in - Breaker)	3,044		
3. Grizzly (BPA Breakers)	11,044		
4. Loop into Slatt	656		
5. Malin-Meridian loop into Captain Jack	982		
6. Alvey Substation - BPA	8,168		
7. Dixonville - PacifiCorp	8,635		
8. Meridian - PacifiCorp	6,548		
9. Power System Control	3,575		
10. Alvey-Spencer - BPA	1,346		
11. Spencer-Dixonville - PacifiCorp	20,388		
12. Dixonville-Meridian - PacifiCorp	<u>32,140</u>		
SUBTOTAL	102,265		
<u>Facilities whose costs will be adjusted using Change Between Estimate and Actual, multiplied by 50 percent</u>			
13. Captain Jack (BPA Breakers)	\$14,335		
14. Captain Jack (Communication and Control)	5,100		
15. Captain Jack (Series Capacitors)	722		
16. Power System Control	5,596		
17. Captain Jack line to Oregon-Calif. border	<u>5,724</u>		
SUBTOTAL	\$31,477		
50 PERCENT OF SUBTOTAL	<u>15,739</u>		
TOTAL	<u>\$118,004</u>		

- 
- 1/ Based on mid-1989 program planning levels.
  - 2/ Actual costs will be available approximately December 1995, or as soon as practicable thereafter. Supporting documentation will be provided including work orders and accounting data for each line item.
  - 3/ For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the revised actual costs of facilities pertaining to each such calculation of the Revised Adjusted Capacity Ownership Price.

**B. INITIAL, ADJUSTED, AND REVISED ADJUSTED CAPACITY OWNERSHIP PRICE<sup>1</sup>**

		(\$ in Millions)		
		(1)	(2)	
<u>Cost Item</u>		Initial Capacity Ownership Price	Adjusted Capacity Ownership Price	Revised Adjusted Capacity Ownership Price <sup>2</sup>
1.	Second 800 MW	\$118	\$___	\$___
2.	AFUDC <sup>3</sup> on Second 800 MW	+ 19	+ ___	+ ___
3.	Existing Support Facilities	+ <u>19.1</u>	+ <u>19.1<sup>4</sup></u>	+ <u>19.1<sup>4</sup></u>
4.	Total Cost <sup>5</sup>	\$156	\$___	\$___
5.	PRICE PER KW (CO-94) <sup>6</sup>	<u>\$215</u>	\$___	\$___

- 
- 1/ Initial, Adjusted, and Revised Adjusted Capacity Ownership Price are determined in accordance with the CO-94 rate in Exhibit A.
  - 2/ Bonneville may make multiple calculations of the Revised Adjusted Capacity Ownership Price pursuant to paragraph 9(a)(3). For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the column pertaining to such calculation and the columns for any previous calculations of the Revised Adjusted Capacity Ownership Price.
  - 3/ AFUDC will be calculated in accordance with the CO-94 rate in Exhibit A.
  - 4/ Not adjusted in calculating the Adjusted Capacity Ownership Price or the Revised Adjusted Capacity Ownership Price.
  - 5/ Bonneville's indirect costs and overhead costs shall be included. Such indirect costs and overhead costs shall be allocated or distributed to the Third AC Intertie Project using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Third AC Intertie Project was under construction. Such allocation or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's Third AC Intertie Project than with respect to any other transmission projects under construction at the same time.
  - 6/ Price per kW is derived by dividing the Total Cost by 725 MW.

C. INITIAL LUMP SUM PAYMENT

1.	Puget's Capacity Ownership Share	=	400 MW
2.	Initial Capacity Ownership Price	X	\$215 (\$215,000/MW)
3.	Initial Lump Sum Payment <sup>1</sup>	=	\$86,000,000
4.	Deduction: Negotiation Deposit with Interest <sup>2</sup>	-	
5.	Due to Bonneville:	=	

-----  
1/ Initial Lump Sum Payment is calculated in accordance with section IV.A of the CO-94 rate in Exhibit A.

2/ Interest is calculated as specified in Bonneville's April 23, 1993, letter to Puget. The rate of interest for the computation is the interest rate applicable to 3-month Treasury Bills as specified in the FEDERAL RESERVE Statistical Release G.13. The rates are determined for the 3-month yield reported on the first day of the month of receipt of the negotiation deposit and on the first day of each subsequent third month thereafter. Interest is compounded quarterly from May 11, 1993, through the date Bonneville receives payment pursuant to paragraph 9(a)(1).

D. ADJUSTED LUMP SUM PAYMENT

1.	Puget's Capacity Ownership Share	=	400 MW
2.	Adjusted Capacity Ownership Price	X	\$
3.	Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Initial Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Puget	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Puget	=	

1/ Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A.

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from the date Bonneville receives payment pursuant to paragraph 9(a)(1) through the date Bonneville or Puget receives payment pursuant to subparagraph 9(a)(2)(B).

**E. REVISED ADJUSTED LUMP SUM PAYMENT**

1.	Puget's Capacity Ownership Share	=	400 MW
2.	Current Revised Adjusted Capacity Ownership Price	X	\$
3.	Current Revised Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Adjusted Lump Sum Payment/immediately preceding Revised Adjusted Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Puget	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Puget	=	

1/ Revised Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A. Bonneville will calculate a Revised Adjusted Lump Sum Payment each time a Revised Adjusted Capacity Ownership Price is calculated pursuant to paragraph 9(a)(3).

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from (a) the date Bonneville or Puget receives payment with respect to the Adjusted Lump Sum Payment pursuant to paragraph 9(a)(2)(B) or (b) the date Bonneville or Puget receives payment with respect to the Revised Adjusted Lump Sum Payment immediately preceding the current Revised Adjusted Lump Sum Payment through the date Bonneville or Puget receives payment with respect to the current Revised Adjusted Lump Sum Payment pursuant to subparagraph 9(a)(3)(B).

**Transmission Loss Factors**

- A. The transmission loss factor to be applied to Puget's schedules for transactions transmitted on Puget's Scheduling Share shall be 2.5 percent.
- B. The transmission loss factor to be applied to Puget's schedules for transactions transmitted pursuant to subparagraph 3(b)(1)(C) shall be 3.0 percent.

**Bonneville's PNW AC Intertie**

**A. TRANSMISSION LINE FACILITIES**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>McNary-John Day 500 kV Line Loop into Slatt:</u>	100	100
• McNary-Slatt Str. 108/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. 1/1 to substation dead end tower, 194 meters		
2. John Day-Grizzly No. 1 500 kV	100	100
3. John Day-Grizzly No. 2 500 kV	100	100
4. Grizzly-Captain Jack No. 1 500 kV	100	100
5. Captain Jack-Malin No. 1 500 kV	100	100
6. Buckley-Grizzly 500 kV	100	57
7. Grizzly-Summer Lake 500 kV	100	57
8. 500 kV double circuit between Buckley and Marion that supports the Buckley- Marion No. 1 and the Ashe-Marion No. 2 500 kV circuits (Str. No. 1/3 to Marion, 159 km)	100	25
9. Marion-Alvey 500 kV	100	50
10. Captain Jack-COB (10 km) 500 kV	100	100
11. Alvey-Dixonville 500 kV	50	100
12. Dixonville-Meridian 500 kV	50	100

**B. SUBSTATION FACILITIES <sup>1/2</sup>**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <b>Slatt 500 kV</b> (Dispatch one-line diagram No. 228962)		
<u>John Day line terminal</u>		
• New Breaker D#5021	100	100
• Existing 500 kV MOD D#5020/7022	100	100
• New 500 kV MOD D#5022	100	100
• Existing 500 kV MOD D#5019	100	50
• Existing Breaker D#5018	100	50



% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>McNary line terminal</u>		
	• 500 kV MOD D#5023/7847	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	Station General		
2.	<b>John Day 500 kV</b> (Dispatch one-line diagram No. 132281)		
	<u>Grizzly No.2 line terminal</u>		
	• Breaker D#4131	100	50
	• Breaker D#4134	100	100
	• MOD D#4132	100	50
	• MOD D#4133/7867	100	100
	• MOD D#4135	100	100
	• Associated Line PTs	100	100
	<u>Grizzly No.1 line terminal</u>		
	• Breaker D#4140	100	50
	• Breaker D#4143	100	100
	• MOD D#4141	100	50
	• MOD D#4142/7869	100	100
	• MOD D#4144	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	Station General		
3.	<b>Buckley 500 kV, Gas Insulated Substation</b> (Dispatch one-line diagram No. 232583)		
	<u>Slatt No. 1 line terminal</u>		
	• Breaker D#4967	100	57
	• Isolating switch D#4966/7328	100	57
	• Isolating switch D#4968/7355	100	57
	• Ground switch D#7415	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Summer Lake No. 1 line terminal</u>		
	• Breaker D#4961	100	57

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• Isolating switch D#4960/7312	100	57
• Isolating switch D#4962/7313	100	57
• Ground switch D#7311	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 line terminal</u>		
• Breaker D#4964	100	57
• Isolating switch D#4963/7314	100	57
• Isolating switch D#4965/7321	100	57
• Ground switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General		
4. <b>Marion 500 kV (Dispatch one-line diagram No. 136180)</b>		
<u>Buckley line terminal</u>		
• Breaker D#4389	100	50
• Breaker D#4386	100	25
• MOD D#4387	100	25
• MOD D#4390	100	50
• MOD D#4388/7751	100	50
• Associated Line PTs	100	50
<u>Alvey line terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4376	100	25
• MOD D#4375/7922	100	50
• MOD D#4373	100	50
• Associated Line PTs	100	50
Station General		
5. <b>Alvey 500 kV (Dispatch one-line diagram No. 121424)</b>		
<u>Bank No. 5 terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD D#5090	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#5089/8157	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 line terminal</u>		
• Breaker D#5084	50	100
• MOD D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 line terminal</u>		
• Breaker D#5087	50	100
• MOD D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV line)</u>	50	100
• MODs D#5100/8160,5101/8159, 5102/8158	50	100
• Bypass breaker D#5103	50	100

Station General

6. **BPA/PacifiCorp Dixonville 500 kV Station** (PacifiCorp's one-line diagram PD-40020)

Note: PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299, as revised or amended.

For Alvey and Meridian line terminals

• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of line terminal PTs	50	100
• Two sets of line terminal arresters	50	100

**% APPLICABLE TO**  
**% BPA OWNED    PNW AC INTERTIE**

<ul style="list-style-type: none"> <li>• Series Capacitor Bank in Alvey-Dixonville 500 kV line and associated isolating devices</li> <li>• 180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices</li> </ul>	<p>50</p> <p>50</p>	<p>100</p> <p>100</p>
<p>Station General</p> <p>7. <b>BPA/PacifiCorp Meridian 500 kV Yard</b> (PacifiCorp's one-line diagram PD-32976)</p> <p><u>Note:</u> PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299.</p> <p><u>For Dixonville line terminal</u></p>		
<ul style="list-style-type: none"> <li>• Breakers 11R2, 11R6</li> <li>• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711</li> <li>• One set of line PTs</li> <li>• One set of line terminal arresters for the Dixonville line and one set for the Captain Jack line</li> <li>• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices</li> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV line and associated isolating devices.</li> </ul>	<p>50</p> <p>100</p> <p>50</p> <p>50</p> <p>50</p> <p>50</p>	<p>50</p> <p>100</p> <p>100</p> <p>100</p> <p>100</p> <p>100</p>
<p>Station General</p> <p>8. <b>Grizzly 500 kV</b> (Dispatch one-line diagram No. 103924)</p> <p><u>John Day No. 1 line terminal</u></p>		
<ul style="list-style-type: none"> <li>• Breaker D#4058</li> <li>• Breaker D#5040</li> <li>• MOD D#4059</li> <li>• MOD D#4057/7848</li> </ul>	<p>100</p> <p>100</p> <p>100</p> <p>100</p>	<p>100</p> <p>100</p> <p>100</p> <p>100</p>

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4056	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 line terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 line terminal</u>		
• Breaker D#5031	100	100
• Breaker D#5028	100	100
• MOD D#5032	100	100
• MOD D#5030/8122	100	100
• MOD D#5029	100	100
• MOD D#5027	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#5037	100	100
• Breaker D#5034	100	100
• MOD D#5038	100	100
• MOD D#5036/8123	100	100
• MOD D#5035	100	100
• MOD D#5033	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake line terminal</u>		
• Breaker D#5025	100	100
• MOD D#5026/8121	100	100
• MOD D#5024	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	<u>180 MVAR Reactor Bank No. 1</u>	100	100
	• Breaker D#4222	100	100
	• Isolating Switch D#4060	100	100
	• Associated Arresters	100	100
	<u>300 MVAR Reactor Bank No. 2</u>	100	100
	• Breaker D#4720	100	100
	• Isolating Switch D#4719	100	100
	• Associated Arresters	100	100
	• 300 MVAR Reactor Bank No. 3 and Neutral Reactor	100	100
	• Breaker D#4038	100	100
	• Isolating Switch D#4062	100	100
	• Neutral isolating switch D#4109/4081	100	100
	• Associated Arresters	100	100
	• Associated PTs	100	100
	• North Main Bus 500 kV PTs	100	100
	• South Main Bus 500 kV PTs	100	100
	Station General		
9.	<b>Sand Spring 500 kV Compensation Station</b> (Dispatch one- line diagram No. 142239)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
10.	<b>Fort Rock 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142237)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
11.	<b>Sycan 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142238)		

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Summer Lake-Malin line) and associated equipment but <b>excluding</b> the bypass MOD D#5065 and transmission tower	65	100
	Station General		
12.	<b>Summer Lake 500 kV</b> (Dispatch one-line diagram No. 232667)		
	<u>Grizzly line terminal</u> (formerly Buckley-Ponderosa Tap)		
	• Breaker D#4959	100	57
	• MOD D#4955	100	57
	• MOD D#4956/7309	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Malin line terminal</u>		
	• Line protective relays	0	100
	Station General		
13.	<b>Malin 500 kV</b> (Dispatch one-line diagram No. 103923)		
	<u>Captain Jack No. 1 line terminal</u>		
	• Breaker D#4066	100	100
	• Breaker D#4064	100	100
	• MOD D#4068	100	100
	• MOD D#4067/7849	100	100
	• MOD D#4065	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 1 terminal</u>		
	• Breaker D#4186	50	100
	• MOD D#4063/7970	100	100
	• MOD D#4185	50	100
	• MOD D#4187	50	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 2 terminal</u>		

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	• Breaker D#4582	50	100
	• MOD D#4583	50	100
	• MOD D#4581	50	100
	• MOD D#4074/7856	75	100
	<u>Grizzly No. 2/Round Mountain No. 2 line position</u>		
	• Breaker D#4072	75	100
	• MOD D#4073	75	100
	<u>North Main Bus 500 kV PTs</u>	100	100
	<u>South Main Bus 500 kV PTs</u>	50	100
	<u>300 MVAR Shunt Reactor Bank No. 1 and associated arresters and isolating devices (D#4327, 4393)</u>	100	100
	<u>2-239 MVAR Shunt Cap. Banks and associated isolating devices (D#4183, 4181, 4184, 4182, 8065, 8066)</u>	100	100
	<u>Line protective relays for Summer Lake line</u>	0	100
	Station General		
14.	<b>Captain Jack 500 kV (Dispatch one-line diagram No. 248548)</b>		
	<u>Series Cap. Bank No. 1 (Captain Jack-Olinda line)</u>	100	100
	• MODs D#4974/8101, 4973/8099, 4975/8100	100	100
	• Bypass breaker D#4971, 4972		
	<u>Grizzly No. 1 line terminal</u>		
	• Breaker D#4990	100	100
	• Breaker D#4993	100	100
	• MOD D#4989	100	100
	• MOD D#4991/8104	100	100
	• MOD D#4992	100	100
	• MOD D#4994/8105	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Malin No. 1 line terminal</u>		
	• Breaker D#4996	100	100



% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Olinda No. 1 line terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
<u>North Main Bus 500 kV PTs</u>	100	100
South Main Bus 500 kV PTs	100	100
Station General		
<b>15. Chief Joseph Substation (Dispatch one-</b>		
<b>line diagram No. 124313)</b>		
<u>230 kV, 1400 MW Braking Resistor</u>	100	100
Includes breaker dispatch No. A-594, a		
high speed vacuum switch and one 230 kV		
isolating switch in Bay 12		
Station General		

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1/ Station General will be allocated to each substation according to Bonneville's standard methodology.

2/ Each substation includes associated relays.

**Capacity Owners**

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
PNGC	DE-MS79-94BP94523	50	1.4
Puget	DE-MS79-94BP94521	400	11.6
Seattle	DE-MS79-94BP94522	160	4.6
Snohomish	DE-MS79-94BP94525	42	1.2
Tacoma	DE-MS79-94BP94524	41	1.1

PNGC: Pacific Northwest Generating Cooperative  
Puget: Puget Sound Power & Light Company  
Seattle: City of Seattle, City Light Department  
Snohomish: Public Utility District No. 1 of Snohomish County  
Tacoma: Tacoma Public Utilities

**Provisions Required by Statute or Executive Order**

1. Contract Work Hours and Safety Standards Act (40 U.S.C. & 327, et seq.).

(a) Overtime Requirements.

Puget, contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation: liability for unpaid wages; liquidated damages.

In the event of any violation of the provisions set forth in section 1 of this Exhibit H, Puget and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, Puget and such subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in section 1 of this Agreement in the sum of \$10.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provision set forth in section 1 of this Exhibit.

(c) Withholding for unpaid wages and liquidated damages.

The person designated in writing by Bonneville's Administrator with the Authority to enter into, administer, modify, suspend or terminate this Exhibit, make related determinations and findings and bind Bonneville only to the extent of delegated authority shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Puget or its subcontractor, if any, under any such contract

or any other federal contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of Puget or such subcontractor for unpaid wages and liquidated damages as provided in section 2 of this Exhibit.

2. Convict Labor (Exec. Order No. 11755, Dec. 29, 1979).

In connection with the performance or work under this Agreement, Puget and any subcontractor, if any agrees not to employ any person undergoing sentence of imprisonment except as otherwise provided by law.

3. Equal Opportunity (Exec. Order No. 11246, Sep. 24, 1965).

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), Puget has been or is awarded nonexempt federal contracts and/or subcontracts that have an aggregate value in excess of \$25,000.00, Puget shall comply with sections 3(b)(1) through 3(b)(11) below. Upon request, Puget shall provide information necessary to determine the applicability of this clause.

(b) During performance of this Agreement, Puget agrees as follows:

(1) Puget shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

(2) Puget shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: (1) employment; (2) upgrading; (3) demotion; (4) transfer; (5) recruitment or recruitment advertising; (6) layoff or termination; (7) rates of pay or other forms of compensation; and (8) selection for training, including apprenticeship.

(3) Puget shall post in conspicuous places, available to employees and applicants for employment, the notices that explain this clause, such notices to be provided by the person designated in writing by Bonneville's Administrator with the authority to enter into, administer, modify, suspend or terminate this Agreement, make related determinations and findings and bind Bonneville only to the extent of delegated authority (Contracting Officer).

(4) Puget shall, in all solicitations or advertisements for employees placed by or on behalf of Puget, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(5) Puget shall send, to each labor union or representative or of workers with which it has a collective bargaining agreement or other contract or understanding, the notice provided by the Contracting Officer advising the labor union or workers' representative of Puget's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) Puget shall comply with Executive Order No. 11246, Sep. 24, 1965 (30 Fed. Reg. 12319), as amended, and the rules, regulations and orders of the Secretary of Labor.

(7) Puget shall furnish to Bonneville all information required by Executive Order No. 11246, as amended, and by the rules, regulations and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award of this contract, unless filed within 12 months preceding the date of the award of this contract.

(8) Puget shall permit access to its books, records and accounts by Bonneville or the Office of Federal Contract Compliance Programs

(OFCCP) for purpose of investigation to ascertain Puget's compliance with such rules, regulations and orders.

(9) If the OFCCP determines that Puget is not in compliance with this clause or any rule, regulation or order of the Secretary of Labor, this Agreement may be canceled, terminated, or suspended in whole or in part and Puget may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order No. 11246, as amended. In addition, sanctions may be imposed and remedies invoked against Puget as provided in Executive Order No. 11246, as amended, the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10) Puget shall include the terms and conditions of sections 3(b)(1) through 3(b)(11) of this Exhibit in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) Puget shall take such action with respect to any subcontract or purchase order as may direct as means of enforcing these terms and conditions, including sanctions for noncompliance: Provided, that if Puget becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, Puget may request the Government to enter into the litigation to protect the interest of the United States.

(c) Notwithstanding any other clause in this Agreement, disputes relative to this clause will be governed by the procedures in 41 CFR § 66-1.1.

4. Certification of Non-segregated Facilities (48 CFR § 22.810).

(a) Puget certifies that it does not and will not maintain or provide for employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. Puget agrees that a breach of this certification is a violation of section 3 (the Equal Opportunities Clause) of this Exhibit.

(b) Puget agrees that it will (1) obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; (2) retain such certifications in its files (3) forward the following notice to such proposed subcontractors, except where the proposed subcontractors have submitted identical certifications of specific time periods:

"Notice to Prospective Subcontractors of Requirement for  
Certifications of Non-segregated Facilities.

"A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. This certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually)."

5. Officials Not to Benefit (41 U.S.C. § 22).

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement or to any benefit arising from it. However, this clause does not apply to this Agreement to the extent that this Agreement is made with a corporation for the corporation's general benefit.

6. Bonneville's Obligations Not General Obligations of the United States (16 U.S.C. § 839(i)).

None of the offerings of obligations, or promotional materials for such obligations, which may be offered by Puget to fund its activities pursuant to

this Agreement, shall be construed to be, general obligations of the United States, nor are such obligations intended to be or are they secured by the full faith and credit of the United States.

7. Small Business Act (15 U.S.C. §§ 631 and 637).

(a) It is the policy of the Government that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any federal agency.

(b) Puget hereby agrees to carry out the policy set forth in 7(a) in awarding subcontracts to the fullest extent consistent with the efficient performance of this Agreement. Puget further agrees to cooperate on any studies or surveys as may be conducted by the United States Small Business Administration or Bonneville as may be necessary to determine the extent of Puget's compliance with this clause.

(c) As used in this agreement the term "small business concern" shall mean a small business as defined in section 3 of Small Business Act (15 U.S.C. § 632) and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

(1) which is at least 51 percent owned by one or more socially disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

(2) whose management and daily business operations are controlled by one or more such individuals.



Puget shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans and other minorities, or any other individual found to be disadvantaged by the United States Small Business Administration pursuant to section 8(a) of the Small Business Act.

(d) Puget acting in good faith may rely on written representations by its subcontractor regarding its status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

8. Other Statutes, Executive Orders and Regulations.

(a) Puget agrees to comply with the following statutes, executive orders and regulations to the extent applicable:

(1) False Claims Act, 31 U.S.C. § 3729, et seq. Whoever makes or presents to any person or officer in the civil military or naval service of the United States, or to any department or agency thereof, any claim upon or against the United States, or any department or agency thereof, knowing such claim to be false, fictitious or fraudulent, shall be fined not more than \$10,000.00 or imprisoned not more than 5 years, or both;

(2) Rehabilitation Act of 1973, 29 U.S.C. §793, as amended, Executive Order No. 11758, Jan. 15, 1974, and the regulations of the Secretary of Labor, 41 CFR Part 60-250, et seq., which concern affirmative action for handicapped workers;

(3) Vietnam Era Veterans Readjustment Assistance Act of 1972, 38 U.S.C. §§ 101, 102, 240, 241, 1502, 1504, 1507, as amended, and the clauses contained in 41 CFR Part 60-250, et

seq., which concern affirmative action for disabled veterans and veterans of the Vietnam Era;

(4) Executive Order No. 11625, Oct. 13, 1971, and implementing regulations which concern utilization of small disadvantaged business concerns;

(5) Anti-Kickback Act, 41 U.S.C. § 51, et seq.; and

(6) Privacy Act of 1974, 5 U.S.C. § 552a.

(b) Puget agrees to comply with requirements deemed necessary by Bonneville in order to implement Bonneville's obligations under the National Historic Preservation Act of 1966, U.S.C. §§ 470, et seq.

### **Bonneville's PNW AC Intertie Costs**

All costs in sections I through VIII of this Exhibit I shall be subject to the following provisions:

#### **PURPOSE**

Bonneville shall determine and calculate Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs with respect to Bonneville's PNW AC Intertie in accordance with this Exhibit I. None of Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, and End of Term Costs (each of the foregoing for purposes of this sentence, a Cost) shall include any other Cost.

#### **SOURCE OF INFORMATION AND COSTS**

Bonneville shall forecast in accordance with this Exhibit I the costs reflected in any Operating Plan pursuant to Schedules A through H of this Exhibit using the most detailed information available to Bonneville from its budget process at the time the forecast is made. Bonneville shall determine the actual costs reflected in any Operating Plan pursuant to Schedules A through H, using Bonneville's then existing accounting system in accordance with this Exhibit I. All costs reflected in Schedules A through H shall be net of credit.

Bonneville shall determine its overall overhead and overall indirect costs. A portion of Bonneville's overall overhead and indirect costs shall be allocated to such total system operations costs (pursuant to section I below), total system maintenance costs (pursuant to section II below), total capital costs (pursuant to sections III and IV below), Other Costs (pursuant to section V below), Contracts and Rates Costs (pursuant to section VI below), Power Scheduling Costs (pursuant to section VII below), and End of Term Costs (pursuant to section VIII below) using Bonneville's

normal allocation or distribution methodologies for such costs, as such methodologies may be changed by Bonneville from time to time. Such allocations or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's PNW AC Intertie than with respect to other transmission facilities.

Bonneville shall record its costs into its accounting systems in accordance with generally accepted accounting principles. For purposes of this Agreement, "generally accepted accounting principles" means the common set of accounting concepts, standards, and procedures that are adopted by entities (such as the utility industry) for purposes of financial statement disclosure.

Whenever Bonneville alters its accounting system or methods to permit costs referred to in this Exhibit I, which were previously allocated to functions and activities, to be directly assigned to function and activities, then in that event Puget and Bonneville shall, in concert with the Capacity Owners other than Puget, in good faith negotiate revisions to this Exhibit I to include such directly assigned costs.

## COSTS

### I. Operations Costs

#### **A. Operations Costs - Allocation Factor**

The allocation factor (Schedule A, line 3) used to determine the Allocated Direct Cost of Operations Cost, Indirect Cost of Operations Cost, and Overhead Cost of Operations Cost is the ratio of major facility units (MFUs) of Bonneville's PNW AC Intertie operated by Bonneville to MFUs of the Federal Columbia River Transmission System.

An MFU (Schedule A, lines 1 and 2) is any of the following major pieces of power system equipment which, at any given time, is installed on and is a part of the Federal Columbia River Transmission System: substation switchgear (such as power circuit breakers; potential devices; disconnects, load interrupters, hot-stick operated bus links; switching devices, circuit switchers, ground switches; and switchyard equipment terminals); protective equipment (such as grounding devices; reactors; arrestors and resistors;

voltage regulators; engine generators and motor generators; and high voltage fuses); transformation equipment (such as power transformers; diesel generators; grounding transformers; regulators and shunt reactors; synchronous condensers; and shunt or series capacitors); station equipment (such as switchyard lighting, batteries and chargers, air compressors, station service equipment, and lightening arrestors); instruments, control, and supervisory equipment (such as switchboards, instruments, and control panels; relay panels, transfer trip, and single-pole relaying; and oscillographs; fault detectors and locators; sequential events recorders, supervisory control, and data acquisition equipment; and indicating meters, instruments, and loggers); and equipment specific to direct current and static var compensator stations (such as mercury arc valves; thyristor systems; air handling packages; water control packages; harmonic filtering systems; motor control centers, such as fans, pumps, and dampening resistors; and valve damping resistors); or devices that perform similar types of functions.

Once each fiscal year, Bonneville shall count the number of MFUs on Bonneville's PNW AC Intertie (exclusive of facilities operated by others) (Schedule A, line 1) and the number of MFUs on the Federal Columbia River Transmission System (Schedule A, line 2). In calculating the forecast Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs, Bonneville shall use the most recent MFU count available at the time of such calculation in developing its initial Operating Plan for a given fiscal year. For each Operating Plan which is for the same fiscal year, Bonneville shall use the same MFU count in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**B. Operations Costs - Operations Functionalization Factor**

For each Operating Plan, Bonneville's total system operations direct cost, indirect cost and overhead cost (Schedule A, lines 7, 9, and 11) shall be adjusted by an operations functionalization factor (Schedule A, line 6) so that Capacity Owners pay only transmission-related system operations costs. The

operations functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using the costs developed for the last year of the rate period for which Bonneville has developed rates, the operations functionalization factor shall be the ratio of (a) Bonneville's total system operations cost functionalized to transmission (Schedule A, line 4) over (b) Bonneville's total system operations cost (Schedule A, line 5). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**C. Operations Costs - Allocated Direct Costs**

For each Operating Plan, Bonneville shall allocate its total system operations direct costs as set forth in Schedule A, lines 7 and 8, to determine Allocated Direct Costs of Operations Cost (Schedule A, line 8).

Schedule A, line 7, shall reflect Bonneville's total system operations direct costs for a fiscal year. Bonneville's total system operations direct costs for a fiscal year shall include all system operations expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: substation operations (which provides for, among other things, making equipment adjustments to maintain loads and voltages within acceptable limits, switching to deenergize lines and equipment during maintenance outages, isolating damaged equipment, restoring service to customers, visually inspecting equipment, and reading meters that record line and equipment loading and voltages), power system control and dispatching (which provides for, among other things, central dispatching, control, and monitoring of the electric operation of the Federal transmission system; load, frequency, and voltage control of

Federal generating plants; the operating of the system control and data computers at the Dittmer and Eastern Control Centers; and modification and maintenance of the operation-related computers), and operations standards and engineering (which provides for, among other things, analyzing system loads, voltage levels, outage information, stability levels, and other data; making policy recommendations for system operations; planning operations' practices, restoration plans and disturbance ports; development of control center requirements for centralized automation of substations and generation; and Bonneville's participation with other utilities in developing utility operating standards and guides); and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 8, shall reflect Allocated Direct Cost of Operations Cost.

**D. Operations Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system operations indirect costs as set forth in Schedule A, lines 9 and 10, to determine Indirect Costs of Operations Costs.

Schedule A, line 9, shall reflect Bonneville's total system operations indirect costs for a fiscal year. Bonneville's total system operations indirect costs for a fiscal year shall include all system operations indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: general supervision and management, office support, planning, budgeting, training, direction of facilities' operation, and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed

activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 10, shall reflect Indirect Cost of Operations Cost.

**E. Operations Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system operations overhead costs as set forth in Schedule A, lines 11 and 12, to determine Overhead Costs of Operations Costs.

Schedule A, line 11, shall reflect Bonneville's total system operations overhead costs for a fiscal year. Bonneville's total system operations overhead costs for a fiscal year shall include all system operations overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system operations overhead activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.



Schedule A, line 12, shall reflect Overhead Cost of Operations Cost.

Schedule A, line 13, shall reflect Operations Cost.

## **II. Maintenance Costs**

### **A. Maintenance Costs - Power System Control Maintenance Functionalization Factor**

For each Operating Plan, the Power System Control (PSC) maintenance cost (Schedule B, line 4) shall be adjusted by a PSC maintenance functionalization factor (Schedule B, line 3). PSC maintenance is the testing, repair, and engineering support for Bonneville's communications and control systems. The PSC maintenance functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs for the last year of the rate period for which Bonneville has developed rates, the PSC functionalization factor shall be the ratio of (a) Bonneville's total PSC maintenance cost functionalized to transmission from such general rate case (Schedule B, line 1) over (b) Bonneville's total PSC maintenance cost from such general rate case (Schedule B, line 2).

### **B. Maintenance Costs - Direct Costs**

The Direct Costs of Maintenance Costs for a fiscal year (Schedule B, line 7) shall be Bonneville's direct costs of maintaining Bonneville's PNW AC Intertie and shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities for maintenance of Bonneville's PNW AC Intertie: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; pollution control and

abatement; and other system maintenance activities related to preventive and corrective maintenance of Bonneville's PNW AC Intertie undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

With the exception of PSC maintenance costs, Bonneville shall specifically identify the direct costs of maintaining Bonneville's PNW AC Intertie (Schedule B, line 7). To determine PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6), the total PSC direct maintenance cost (Schedule B, line 4) shall be multiplied by (a) the PSC maintenance functionalization factor (Schedule B, line 3) and (b) the MFU allocation factor (Schedule B, line 5) set forth in Schedule A, line 3. The Direct Costs of Maintenance Costs (Schedule B, line 8) shall be the sum of (a) PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6) and (b) the direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost (Schedule B, line 7).

**C. Maintenance Costs - Allocation Factor**

The allocation factor (Schedule B, line 10) used to determine Indirect Cost of Maintenance Cost and Overhead Cost of Maintenance Cost shall be the ratio of the Direct Cost of Maintenance Cost (Schedule B, line 8) to Bonneville's total system maintenance direct cost (Schedule B, line 9), as described below.

Schedule B, line 9, shall reflect Bonneville's total system maintenance direct costs for a fiscal year. Bonneville's total system maintenance direct costs for a fiscal year shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following

activities: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; establishing, monitoring, and updating system maintenance standards, policies, and procedures; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of the Federal Columbia River Transmission System undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 10, shall reflect the percentage which shall be used to allocate Bonneville's total system maintenance indirect cost and total system maintenance overhead cost to Bonneville's PNW AC Intertie.

**D. Maintenance Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance indirect costs as set forth in Schedule B, lines 11 and 12, to determine Indirect Costs of Maintenance Costs.

Schedule B, line 11, shall reflect Bonneville's total system maintenance indirect costs for a fiscal year. Bonneville's total system maintenance indirect costs for a fiscal year shall include all system maintenance indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance any of the following activities: supervision and management, office support, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other system maintenance activities undertaken by Bonneville that are consistent with system maintenance

activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 12, shall reflect Indirect Cost of Maintenance Cost.

**E. Maintenance Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance overhead costs as set forth in Schedule B, lines 13 and 14, to determine Overhead Costs of Maintenance Costs.

Schedule B, line 13, shall reflect Bonneville's total system maintenance overhead costs for a fiscal year. Bonneville's total system maintenance overhead costs for a fiscal year shall include all system maintenance overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system maintenance overhead activities undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule B, line 14, shall reflect Overhead Cost of Maintenance Cost.

Schedule B, line 15, shall reflect Maintenance Cost.

**III. Replacement Costs and Reinforcement Costs**

**A. Replacement Costs and Reinforcement Costs - Direct Costs**

The Direct Costs for Replacements and Reinforcements for a fiscal year (Schedule C, line 1) shall be Bonneville's direct capital costs for Replacements and Reinforcements for such fiscal year and shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, land, materials and equipment, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of the following activities: planning, environmental analyses and mitigation, survey, design, land, materials and equipment, turnkey contracts, contract construction, force account construction, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council. The Direct Costs for any Replacement or Reinforcement for a fiscal year shall also include the costs of removal and any salvage credits with respect to any PNW AC Intertie facility removed on account of such Replacement or Reinforcement.

**B. Replacement Costs and Reinforcement Costs - Indirect Costs and Overhead Costs**

For each Replacement and Reinforcement project, the Indirect Costs and Overhead Costs for Replacements and Reinforcements (Schedule C, line 2) shall be allocated or distributed to such Replacements and Reinforcements using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs

to all of Bonneville's other capital projects during the time the Replacements and Reinforcements are under construction. Schedule C, line 2, shall reflect the Indirect Costs and Overhead Costs of Replacements and Reinforcements.

Indirect Costs of Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel expenses, service contracts, consulting contracts, administration of materials, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: supervision, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Overhead Costs for Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other costs, each of which being which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering);

and (c) other replacement and reinforcement activities undertaken by Bonneville that are consistent with replacement and reinforcement activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

**C. Replacement Costs and Reinforcement Costs - Allowance for Funds Used During Construction (AFUDC)**

Schedule C, line 3, shall reflect AFUDC for Replacements and Reinforcements. At the beginning of each fiscal year, Bonneville shall calculate the AFUDC rate for such fiscal year. Bonneville shall apply such AFUDC rate monthly to the costs in accounts for construction work in progress for Replacements and Reinforcements.

**D. Replacement Costs and Reinforcement Costs - Interest**

Schedule C, line 4, shall reflect the interest cost payable by Puget pursuant to this Agreement with respect to any Replacement or Reinforcement. Such interest cost for any Replacement or any Reinforcement shall be simple interest calculated at a rate equal to the weighted average interest rate on Bonneville's then outstanding bonds or other debt instruments and such interest shall accrue from the date Bonneville stops accruing AFUDC (approximately the date the work order for such Replacement or such Reinforcement is closed) with respect to such Replacement or such Reinforcement to the due date of the monthly power bill containing the charge for such Replacement or such Reinforcement.

**IV. General Plant Costs**

For each Operating Plan, Bonneville shall adjust, amortize, and allocate Bonneville's total general plant investment (as described below) and Bonneville's Dittmer control equipment investment as set forth in Schedule D, lines 1 through 11, to determine General Plant Cost.

Schedule D, line 1, shall reflect for a fiscal year Bonneville's total cumulative general plant investment. Bonneville's total general plant investment shall

include Bonneville's investments in any of the following: land-general plant, structures/improvements-general plant, office furniture and equipment, transportation equipment, stores equipment, tools/shop/garage equipment, laboratory equipment, power operated equipment, communication equipment, miscellaneous equipment (including equipment or apparatus used in Bonneville's utility operations which are not includable in any other general plant investment category), and other similar investment made by Bonneville that is consistent with general plant investment made by utilities in the Western Systems Coordinating Council.

Schedule D, line 2, shall reflect for a fiscal year Bonneville's cumulative investment in Dittmer control equipment.

Schedule D, line 3, shall reflect Bonneville's total general plant investment and Bonneville's Dittmer control equipment investment functionalized to generation using the methodology for functionalizing general plant as set forth in Bonneville's general rate case most recently approved by FERC on an interim basis.

Schedule D, line 4, shall reflect any general plant investment recovered from all Capacity Owners under the CO-94 rate as such general plant investment is unitized by Bonneville; provided, however, for the first two Operating Plans Bonneville shall estimate the amount of the general plant investment included in the Initial Capacity Ownership Price, which estimate shall be reflected in Schedule D, line 4, and Bonneville shall modify such Operating Plans by December 1995, or as soon as practicable thereafter, to reflect in Schedule D, line 4, the actual general plant investment included in the Adjusted Capacity Ownership Price.

Schedule D, line 5, shall reflect any general plant investment recovered from Capacity Owners pursuant to section 5 for Upgrades. The agreements referred to in subsection 5(d) and subparagraph 5(e)(3)(B) shall specify the



portion of costs of an Upgrade that will be considered general plant investment.

Schedule D, line 6, shall reflect Bonneville's adjusted general plant investment functionalized to transmission and shall be calculated by adding line 1 and line 2, and from the sum of line 1 and line 2 subtracting line 3, line 4, and line 5.

Schedule D, line 7, shall reflect Bonneville's annual cost of Bonneville's adjusted general plant investment functionalized to transmission (Schedule D, line 6). Such annual cost shall be the sum of the annual interest and amortization amounts for each category of adjusted general plant investment. The annual interest and amortization amounts for each category shall be calculated by using the investment amounts for each such category, the weighted average interest rate for all Bonneville then outstanding bonds, and the average service lives for each such category from Bonneville's most recent depreciation study. If Bonneville changes its practice of financing general plant investment with bonds, the interest rate used in the calculation referred to in the immediately preceding sentence shall reflect the weighted average interest rate for all of Bonneville's then outstanding debt instruments.

Schedule D, line 8, shall reflect for a fiscal year Bonneville's total cumulative transmission plant-in-service investment (not including general plant investment). Bonneville's total transmission plant-in-service investment shall include Bonneville's investment in any of the following items reflected as total transmission plant-in-service (not including general plant investment) in the Segmentation Study (from Bonneville's general rate case most recently approved by FERC on an interim basis: land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant

investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

Schedule D, line 9, shall be the annual cost ratio of Bonneville's PNW AC Intertie transmission-related general plant derived by dividing Schedule D, line 7, by Schedule D, line 8.

Schedule D, line 10, shall reflect Bonneville's PNW AC Intertie investment. Bonneville's PNW AC Intertie investment shall include Bonneville's investment in any of the following items reflected as Bonneville's PNW AC Intertie plant-in-service in the Segmentation Study from Bonneville's general rate case most recently approved by FERC on an interim basis (or the successor to the Segmentation Study, as determined by Bonneville): land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

V. Other Costs

For each Operating Plan, Bonneville shall include Other Costs associated with Bonneville's PNW AC Intertie for a fiscal year. Such Other Costs (Schedule E, line 3) for a fiscal year shall include for such fiscal year any of the following: (1) the costs of operation; maintenance; capital replacements, reinforcements, additions, betterments, renewals; or related costs which Bonneville is obligated to pay pursuant to the Northwest Intertie Agreements or other contracts referred to in subsection 8(b) of this Agreement; and (2) costs paid by Bonneville including monetary judgments, settlements, binding awards, non-contract penalties, contract penalties, liquidated damages, or forfeiture costs, and Bonneville's costs related to such monetary judgments, settlements, binding awards, non-contract penalties, contract penalties,

liquidated damages, or forfeiture costs assessed against or incurred by Bonneville as a facilities owner of, or the operator of, the PNW AC Intertie; provided, however, that Puget shall not be obligated to pay a share of any such costs that are not properly allocated to Bonneville's PNW AC Intertie.

Bonneville shall forecast its share of operations, maintenance, capital, and related costs for activities that PacifiCorp performs on Bonneville/PacifiCorp jointly-owned PNW AC Intertie facilities based on forecasts received from PacifiCorp or on actual costs for the most recent 12 consecutive month period prior to preparation of an Operating Plan.

**VI. Contracts and Rates Costs**

**A. Contracts and Rates Costs - Functionalization Factor**

For each Operating Plan, Bonneville's total contracts and rates direct costs, indirect costs, and overhead costs (Schedule F, lines 5, 6, and 7) shall be adjusted by a contracts and rates functionalization factor (Schedule F, line 3). The contracts and rates functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the contracts and rates functionalization factor shall be the ratio of (a) Bonneville's total transmission-related contracts and rates cost (Schedule F, line 1) over (b) Bonneville's total contracts and rates cost (Schedule F, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Contracts and Rates Cost.

**B. Contracts and Rates Costs - Allocation Factor**

The allocation factor (Schedule F, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Contracts and Rates Costs - Total Contracts and Rates Costs**

Bonneville's total contracts and rates costs for a fiscal year (Schedule F, line 8) shall include Bonneville's expenses (including direct, indirect, and

overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: rate filings with FERC, development of rates customers pay Bonneville for electric power and for wheeling their own power on Bonneville's transmission system; negotiation, administration, and coordination of contracts for power sales, power exchanges, conservation, wheeling and resource services; and analyzing, processing, and issuing all customer power bills; and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule F, line 9, shall reflect Contracts and Rates Cost.

**VII. Power Scheduling Costs**

For each Operating Plan, Bonneville's total power scheduling direct costs, indirect costs, and overhead costs (Schedule G, lines 5, 6, and 7) shall be adjusted by a power scheduling functionalization factor (Schedule G, line 3). The power scheduling functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the power scheduling functionalization factor shall be the ratio of (a) Bonneville's total transmission-related power scheduling cost (Schedule G, line 1) over (b) Bonneville's total power scheduling cost (Schedule G, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Power Scheduling Cost.

**B. Power Scheduling Costs - Allocation Factor**

The allocation factor (Schedule G, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Power Scheduling Costs - Total Power Scheduling Costs**

Bonneville's total power scheduling costs for a fiscal year (Schedule G, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: scheduling and marketing power to Bonneville customers and interconnected utilities, forecasting the hourly power requirements of Bonneville customers and the interchange of power with the region's interconnected electric utilities and with utilities outside the region, scheduling power to be generated at each Federal plant, weather and streamflow forecasting, controlling the reservoirs, implementing the intertie access policy, coordinating power production with the multi-purpose operation of the Federal power system, seasonal load/resource planning, developing current short-term operating plans, short-term marketing of Bonneville's surplus firm power, exchanges, and nonfirm energy, and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule G, line 9, shall reflect Power Scheduling Cost.

**VIII. End of Term Costs**

When all facilities of the PNW AC Intertie are determined, in accordance with Northwest Intertie Agreements, to be no longer operable, Bonneville shall include a forecast of all Bonneville's costs associated with

decommissioning the PNW AC Intertie and credits resulting from such decommissioning in the Operating Plan for each fiscal year that such End of Term Costs are to be incurred. Bonneville's End of Term Costs for a fiscal year (Schedule H, line 4) shall include Bonneville's costs (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: decommissioning, razing structures, disposal of debris, site restoration, meeting all requirements of Federal, state, or local applicable law relating to the foregoing activities, and other decommissioning activities undertaken by Bonneville that are consistent with decommissioning activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

**Schedule A for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1			
MFUs of the FCRTS	2			
Allocation factor (Line 1/Line 2)	3			
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from rate case	4			
Bonneville's total system operations cost from rate case	5			
Operations functionalization factor (Line 4/Line 5)	6			
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7			
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8			

	Line No.	Forecast	Actual	Difference
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	_____	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	_____	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	_____	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	_____	_____	_____
<b>F. Operations Cost (Lines 8 + 10 + 12)</b>	13	_____	_____	_____



**Schedule B for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC)</b>				
<b>Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1		_____	
Bonneville's total PSC maintenance cost from rate case	2		_____	
PSC maintenance functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	_____	_____	_____
MFU Allocation Factor (Schedule A, line 3)	5		_____	
PSC direct maintenance cost for Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	_____	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	_____	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	_____	_____	_____

**C. Allocation Factor**

Bonneville's total system maintenance direct cost	9			
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10			

**D. Indirect Cost**

Bonneville's total system maintenance indirect cost	11			
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12			

**E. Overhead Cost**

Bonneville's total system maintenance overhead cost	13			
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14			

**F. Maintenance Cost (Lines 8 + 12 + 14)**

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**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost.</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	_____	_____	_____

**Notes:**

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.

Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

**Schedule D for FY XXXX**

	Line No.	Allocated Actual
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment	1	_____
Bonneville's Dittmer control equipment investment	2	_____
General plant investment of lines 1 and 2 functionalized to generation	3	_____
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price	4	_____
General plant investment recovered from Capacity Owners for Upgrades	5	_____
Adjusted general plant investment functionalized to transmission (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	_____
BPA total annual cost of Line 6 general plant investment	7	_____
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study	8	_____
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8)	9	_____
Bonneville's PNW AC Intertie investment from Segmentation Study	10	_____
<b>General Plant Cost (Line 9 + Line 10)</b>	11	_____

**Schedule E for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	_____	_____	_____
<b>B. Other PNW AC Interlie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	_____	_____	_____

**Schedule F for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates Costs</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1		_____	
Total contracts and rates cost from rate case	2		_____	
Contracts and rates cost functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4		_____	
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	_____	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	_____	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	_____	_____	_____
<b>D. Contracts and Rates Cost (Line 8 * Line 3 * Line 4)</b>	9	_____	_____	_____

**Schedule G for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VII. Power Scheduling Costs</b>				
<b>A. Power Scheduling Functionalization Factor</b>				
Transmission-related power scheduling costs from rate case	1			
Total power scheduling cost from rate case	2			
Power scheduling cost functionalization factor (Line 1/Line 2)	3			
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4			
<b>C. Total Power Scheduling Costs</b>				
Power scheduling direct costs	5			
Power scheduling indirect costs	6			
Power scheduling overhead costs	7			
Bonneville's total power scheduling costs (Line 5 + Line 6 + Line 7)	8			
<b>D. Power Scheduling Cost (Line 8 * Line 3 * Line 4)</b>	<b>9</b>			

**Schedule H for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	_____	_____	_____
<b>C. Credits</b>				
Credits from decommissioning PNW AC Interlie facilities	3	( _____ )	( _____ )	( _____ )
<b>D. End of Term Costs</b>				
	4	_____	_____	_____



**Puget's Initial Transaction with California Utility**

Name of parties: Puget / Pacific Gas & Electric Company

Term of Contract: Variable

Date of Execution: October 25, 1991

Amount of Transaction (MW): 300 MW

**PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT**

executed by the  
**UNITED STATES OF AMERICA**  
**DEPARTMENT OF ENERGY**  
acting by and through the  
**BONNEVILLE POWER ADMINISTRATION**  
and  
**THE CITY OF SEATTLE, WASHINGTON**

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- Exhibit A (CO-94, AC-93, IS-93 Rate Schedules and General Transmission Rate Schedule Provisions)
- Exhibit B (Annual Costs Rate)
- Exhibit C (Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share)
- Exhibit D (Lump Sum Payment Calculation)
- Exhibit E (Transmission Loss Factors)
- Exhibit F (Bonneville's PNW AC Intertie)
- Exhibit G (Capacity Owners)
- Exhibit H (Provisions Required by Statute or Executive Order)
- Exhibit I (Bonneville's PNW AC Intertie Costs)
- Exhibit J (Seattle's Initial Transaction with California Utility)

This PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT (Agreement) is entered into as of September 27, 1994, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville or BPA) and the CITY OF SEATTLE, CITY LIGHT DEPARTMENT, (Seattle), a municipal corporation operating and existing under the laws of the state of Washington. Each of Bonneville and Seattle is sometimes referred to individually in this Agreement as "Party"; Bonneville and Seattle are sometimes referred to together in this Agreement as "Parties."

WITNESSETH:

WHEREAS Bonneville, Portland General Electric Company (Portland), and PacifiCorp Electric Operations (PacifiCorp) planned and constructed improvements and additions to the Northwest portion of the PNW-PSW Intertie; and

WHEREAS such construction was completed in December 1993 resulting in 1600 MW of additional PNW AC Intertie Rated Transfer Capability in a north-to-

south direction and 1225 MW of additional PNW AC Intertie Rated Transfer Capability in a south-to-north direction; and

WHEREAS pursuant to the Northwest Intertie Agreements, Bonneville operates the PNW AC Intertie, in coordination with Portland and PacifiCorp, as a single system so as to maximize PNW AC Intertie Rated Transfer Capability and Operational Transfer Capability consistent with Prudent Utility Practice; and

WHEREAS Bonneville has developed a proposal to offer to PNW non-Federal scheduling utilities and joint agencies capacity ownership rights in 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability; and

WHEREAS such proposal has been studied in Bonneville's Final Non-Federal Participation Environmental Impact Statement, dated January 1994, and was the selected alternative in the Administrator's Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville and Seattle executed a Memorandum of Understanding, DE-MS79-91BP93467, dated September 18, 1991, which, among other things, sets forth the principles for Seattle's capacity ownership rights in Bonneville's PNW AC Intertie; and

WHEREAS interest expressed in capacity ownership by PNW non-Federal scheduling utilities and joint agencies exceeded the 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability offered by Bonneville, and as a result Bonneville developed and applied an allocation methodology selected in the Administrator's Capacity Ownership Record of Decision, dated March 25, 1994; and

WHEREAS concurrent with the execution of this Agreement, Bonneville and Seattle are executing an amendment to Contract No. DE-MS79-88BP91657 to provide Seattle with, among other things, network wheeling between the John Day Substation and Seattle's transmission system; and

WHEREAS Bonneville is authorized pursuant to law to dispose of electric power generated at various Federal hydroelectric projects in the PNW, or acquired from other resources, to construct and operate transmission facilities, to provide

transmission and other services, and to enter into agreements to carry out such authority;

NOW, THEREFORE, Bonneville and Seattle agree as follows:

1. **DEFINITIONS**

- (a) "Adjusted Capacity Ownership Price" means the price calculated pursuant to column 2, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (b) "Adjusted Lump Sum Payment" means the Adjusted Capacity Ownership Price multiplied by Seattle's Capacity Ownership Share (in kilowatts), as described with more particularity in section D of Exhibit D.
- (c) "Allocated Direct Costs" means for each fiscal year the Operations Cost as allocated to Bonneville's PNW AC Intertie in accordance with section I.C of Exhibit I for such fiscal year. Allocated Direct Costs are not included in Direct Costs, Indirect Costs, or Overhead Costs.
- (d) "Allowance for Funds Used During Construction" or "AFUDC" constitutes interest on the funds used for utility plant under construction. The AFUDC rate approximates the cost of money being used to finance current construction work in progress and is calculated in accordance with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors. AFUDC shall be capitalized in accordance with Bonneville's accounting procedures and practices, and in any event consistent with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors.
- (e) "Billing Provisions" means those provisions set forth in Exhibit B, Part B.

- (f) "Bonneville's PNW AC Intertie" means facilities of the PNW AC Intertie owned partially or entirely by Bonneville specified in Exhibit F together with the equipment and facilities installed in or connected to such facilities specified in Exhibit F, to the extent such facilities are necessary for the transmission of power on the PNW AC Intertie.
- (g) "Bonneville's PNW AC Intertie Operational Transfer Capability" means Bonneville's PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and by operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (h) "Bonneville's PNW AC Intertie Rated Transfer Capability" means Bonneville's share of the PNW AC Intertie Rated Transfer Capability as determined in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (i) "Capacity Owner" means each of the parties listed in Exhibit G to the extent that such party has entered into a Capacity Ownership Agreement.
- (j) "Capacity Ownership Agreement" means, in the singular, this Agreement or the agreement, substantially identical to this Agreement, entered into by each Capacity Owner (other than Seattle) and Bonneville, and in the plural, this Agreement and all such substantially identical agreements entered into respectively by

Capacity Owners (other than Seattle) and Bonneville, as each such agreement may be amended or supplemented from time to time pursuant to the terms of such agreement, concerning (among other things) the rights of such Capacity Owner with respect to the PNW AC Intertie.

- (k) "Capacity Ownership Percentage" means, as of the Effective Date, in the singular, the percentage of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Seattle pursuant to this Agreement, which percentage is determined by dividing Seattle's Capacity Ownership Share as of the Effective Date by Bonneville's PNW AC Intertie Rated Transfer Capability as of the Effective Date (such percentage being subject to change pursuant to the terms of this Agreement), and in the plural, the percentages of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which percentages are set forth in Exhibit G (each of such percentages being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (l) "Capacity Ownership Rights" means the rights of Seattle pursuant to this Agreement.
- (m) "Capacity Ownership Share" means, except as such term is otherwise used in sections III.A and III.B of the CO-94 rate set forth in Exhibit A on the Effective Date, in the singular, the MW amount of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Seattle pursuant to this Agreement, which MW amount is set forth in Exhibit C (such amount being subject to change pursuant to the terms of this Agreement), and in the plural, the MW amounts of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which amounts are set forth in Exhibit G (each of such amounts being subject to

change pursuant to the respective terms of such Capacity Ownership Agreements).

- (n) "Committee" has the meaning set forth in subsection 12(a).
- (o) "Contracts and Rates Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville's total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville's PNW AC Intertie.
- (p) "Direct Costs" means any costs incurred by Bonneville which are readily identifiable, or obviously traceable to, and directly benefit, a specific Bonneville program, project, or other cost objective. Direct Costs are not included in Allocated Direct Costs, Overhead Costs, or Indirect Costs. The methods for determining Direct Costs for Bonneville's PNW AC Intertie are set forth in sections II.B and III.A of Exhibit I.
- (q) "Effective Date" means the date as of which this Agreement becomes effective pursuant to section 2.
- (r) "End of Term Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.
- (s) "FERC" means the Federal Energy Regulatory Commission or its regulatory successor.
- (t) "General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The



method for determining General Plant Cost is set forth in section IV of Exhibit I.

- (u) "GTRSP" or "GTRSPs" means Bonneville's General Transmission Rate Schedule Provisions, set forth in Exhibit A, as such provisions may be revised from time to time.
- (v) "Indirect Costs" means any costs incurred by Bonneville which indirectly benefit and are directly charged to a specific Bonneville program, project, or other cost objective for which a Direct Cost or Allocated Direct Cost is charged. Indirect Costs shall not be included in Allocated Direct Costs, Direct Costs, or Overhead Costs. The methods for determining Indirect Costs for Bonneville's PNW AC Intertie are set forth in sections I.D, II.D, and III.B of Exhibit I.
- (w) "Initial Capacity Ownership Price" means \$215 per kilowatt, the calculation of which charge is set forth in column 1, section B of Exhibit D and in section III.A of the CO-94 rate in Exhibit A.
- (x) "Initial Lump Sum Payment" means the Initial Capacity Ownership Price multiplied by Seattle's Capacity Ownership Share (in kilowatts), as described with more particularity in section C of Exhibit D.
- (y) "Interconnection Agreement" means the "Interim Interconnection Agreement Between Certain California-Oregon Transmission Project Participants and Northwest Participants," Contract No. DE-MS79-91BP93158, as amended or superseded.
- (z) "Joint AC Intertie" is as defined in the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (aa) "Joint Intertie Scheduling Office" or "JISO" means the group of Bonneville, Portland, and PacifiCorp schedulers, which, among other things, accepts PNW-PSW Intertie Preschedules.

- (bb) "Maintenance Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville's PNW AC Intertie, maintenance Indirect Costs for Bonneville's PNW AC Intertie, and maintenance Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.
- (cc) "MW" means megawatt.
- (dd) "Northwest Intertie Agreements" means the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (ee) "Operating Plan" means, subject to subsection 13(o), with respect to any fiscal year commencing on or after the day on which the annual costs rate set forth in Exhibit B has been approved on an interim or final basis by FERC, the written document containing the information described in subsection 13(c), as such document may be amended pursuant to section 13, 14, or 16.
- (ff) "Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.
- (gg) "Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

- (hh) "Overhead Cost" means administrative and general costs, support service costs, or other costs similar in nature which are distributed or allocated by Bonneville to Bonneville's PNW AC Intertie. Overhead Costs are not included in Direct Costs, Allocated Direct Costs, or Indirect Costs. The methods for determining Overhead Costs are set forth in sections I.E, II.E, and III.B of Exhibit I.
- (ii) "Pacific Northwest" or "PNW" means the area defined as the Pacific Northwest in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. section 839a(14).
- (jj) "Pacific Time" means Pacific Standard Time and Pacific Daylight Time as each is in force.
- (kk) "PNW AC Intertie" means facilities including, but not limited to, the following: two 500 kV transmission lines extending from John Day Substation to the Malin Substation and to the California-Oregon border; portions of John Day, Grizzly, and Malin Substations and the Sand Springs, Fort Rock, and Sycan Compensation Stations; a portion of the Buckley-Summer Lake 500 kV transmission line and associated substations; portions of the Buckley-Marion and Marion-Alvey 500 kV transmission lines and associated facilities; a portion of Bonneville's capacity rights in the Summer Lake-Malin 500 kV transmission line; Bonneville's rights in the Meridian-Malin 500 kV transmission line and Bonneville's share of ownership of the Alvey-Meridian 500 kV transmission line; Captain Jack Substation; the 500 kV transmission line from Captain Jack Substation to the California-Oregon border; and any modifications, additions, improvements, or other alterations thereto.
- (ll) "PNW AC Intertie Operational Transfer Capability" means the PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with

the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.

- (mm) "PNW AC Intertie Rated Transfer Capability" means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.
- (nn) "Pacific Northwest-Pacific Southwest Intertie" or "PNW-PSW Intertie" means the DC transmission line between the Celilo Converter Station in The Dalles, Oregon, and the Sylmar Converter Station near Los Angeles, California, the PNW AC Intertie, and the AC Intertie in California including, without limitation, the California-Oregon Transmission Project.
- (oo) "Pacific Northwest Non-Federal Utility" means any electric utility that serves retail load in the region consisting of (1) the states of Oregon, Washington, and Idaho, the portion of the state of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River Basin drainage basin, and (2) any contiguous areas, not in excess of seventy-five air miles from the area referred to in (1) above, which areas are a part of the service area of a rural electric cooperative power customer served by Bonneville on the effective date of the Pacific Northwest Power Planning and Conservation Act (P.L. 96-501) having a distribution system from which it serves both within and without such region.
- (pp) "Power Scheduling Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit

I to determine Power Scheduling Costs for Bonneville's PNW AC Intertie.

- (qq) "Preschedule" means the schedule submitted by Seattle to the JISO pursuant to paragraph 4(b)(1) for transactions prepared each Working Day for the period beginning 2400 hours of the current Working Day through 2400 hours of the next Working Day.
- (rr) "Prudent Utility Practice" means, at any particular time, the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto that would achieve the desired result or, if there are no such practices, methods, and acts, the practices, methods, and acts which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to achieve the desired result consistent with reliability and safety.
- (ss) "Real-time Schedule" means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed by the JISO to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by Seattle.
- (tt) "Reinforcement" means any transmission plant modification, addition, improvement, or other alteration to the Federal Columbia River Transmission System which is not a Replacement or an Upgrade and which is made pursuant to subsection 7(c).
- (uu) "Reinforcement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Seattle for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on

account of such Reinforcement. Reinforcement Costs do not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

- (vv) "Replacement" means for any transmission plant addition, betterment, renewal and equipment or facility that takes the place of or adds to any existing equipment or facility on Bonneville's PNW AC Intertie that does not increase Bonneville's PNW AC Intertie Rated Transfer Capability.
- (ww) "Replacement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Seattle for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Replacement. General Plant Cost is not included in Replacement Costs. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.
- (xx) "Revised Adjusted Capacity Ownership Price" means a price calculated pursuant to column 3, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (yy) "Revised Adjusted Lump Sum Payment" means a Revised Adjusted Capacity Ownership Price multiplied by Seattle's Capacity Ownership Share (in kilowatts), as described with more particularity in section E of Exhibit D.
- (zz) "Scheduler" means the person authorized by a Party to accept or submit schedules pursuant to section 4 and authorized to implement,

interpret, and vary the scheduling procedures set forth in such section pursuant to this Agreement.

- (aaa) "Scheduling Percentage" means the percentage of the PNW AC Intertie Rated Transfer Capability owned by Seattle pursuant to this Agreement, which percentage is determined by dividing Seattle's Capacity Ownership Share by the PNW AC Intertie Rated Transfer Capability.
- (bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of Seattle's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour.
- (ccc) "Scheduling Utility" means either (i) a Pacific Northwest Non-Federal Utility that serves a retail service area and operates a generation control area, or (ii) a Pacific Northwest Non-Federal Utility designated by Bonneville as a "computed requirements customer" or its equivalent.
- (ddd) "Term" means the period of effectiveness of this Agreement set forth in subsection 2(a).
- (eee) "Third AC Intertie" means the Third AC Intertie Project, which project increased the PNW AC Intertie Rated Transfer Capability by 1600 MW in a north-to-south direction and by 1225 MW in a south-to-north direction.
- (fff) "Third AC Intertie Project" means the Third AC Intertie System Reinforcement and the construction of the Alvey-Meridian 500 kV transmission line and of facilities related to such transmission line during the period from July 1984 through December 1993.
- (ggg) "Third AC Intertie System Reinforcement" means the improvements, additions and modifications to the PNW AC Intertie constructed during the period from July 1984 through December 1993 plus the construction of the Captain Jack substation and of facilities related to

such substation during the period from July 1984 through December 1993.

- (hhh) "Upgrade" means any MW increase to Bonneville's PNW AC Intertie Rated Transfer Capability which arises from or is related to an increase to the PNW AC Intertie Rated Transfer Capability.
- (iii) "Working Day" means any day other than Saturday, Sunday, and a legal holiday recognized by the Federal government or Seattle.

## 2. **TERM AND TERMINATION**

- (a) This Agreement shall become effective as of the date of execution and delivery of this Agreement by both of the Parties. This Agreement shall continue in effect so long as any facilities of the PNW AC Intertie are in existence and operable, unless otherwise earlier terminated by written agreement of both of the Parties or unless terminated pursuant to the terms of this Agreement. All liabilities incurred under this Agreement shall be preserved until satisfied.
- (b) Notwithstanding subsection 2(a), no Capacity Ownership Rights may be exercised by Seattle until payment is made by Seattle pursuant to paragraph 9(a)(1) and received by Bonneville.
- (c) If Bonneville does not receive the payment from Seattle pursuant to paragraph 9(a)(1), then Bonneville shall have the option to terminate this Agreement by delivering to Seattle written notice of such termination.
- (d) Notwithstanding subsection 2(a), if Bonneville incurs End of Term Costs, the following provisions of this Agreement, and all rights and obligations thereunder, shall continue in full force and effect until Bonneville renders its final bill to Seattle pursuant to subsection 9(b), unless this Agreement is earlier terminated by mutual agreement of the Parties: subsections 2(b), 2(c), and 2(d), sections 1, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, and 23, and Exhibits A, B, C, D, F, G, H,



and I. All liabilities incurred under such provisions of this Agreement shall be preserved until satisfied.

- (e) If this Agreement has not become effective pursuant to subsection 2(a) within 12 months following the date upon which Bonneville executes and delivers this Agreement to Seattle, this Agreement shall be void ab initio and of no force or effect.

### **3. CAPACITY RIGHTS**

#### **(a) Purchase and Sale of Capacity**

Pursuant to the terms and conditions of this Agreement, Seattle purchases from Bonneville and Bonneville sells to Seattle the Capacity Ownership Rights.

#### **(b) Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, Seattle shall notify Bonneville in writing of Seattle's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and Seattle shall have the right to utilize its Scheduling Share pursuant to the paragraph Seattle elects. Prior to Bonneville's receipt of such notification, Seattle shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If Seattle fails to make an election within the prescribed time period, Seattle shall be deemed to have elected the option set forth in paragraph 3(b)(1).

##### **(1) No Third Party Wheeling**

- (A) Except as expressly provided in subparagraph 3(b)(1)(B), Seattle shall not use its Scheduling Share to transmit power or energy (except for inadvertent power flows) that Seattle does not own at the California-Oregon border or for which transmission Seattle receives any revenue that would be reportable in

Seattle's accounting system where revenues received for wheeling for other entities would be booked.

(B) If Seattle's Scheduling Share is not fully utilized by Seattle in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions over the unused portion of Seattle's Scheduling Share for such hour but no longer than such hour. Seattle shall be compensated for such wheeling solely by the payments as described in sections 3(b)(1)(B)(i) and (ii) below. For purposes of this subparagraph 3(b)(1)(B), Seattle's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Seattle has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour on any MW amount of Seattle's Scheduling Share. In return for Seattle's Scheduling Share being made available to Bonneville pursuant to this subparagraph 3(b)(1)(B), Bonneville shall pay Seattle

(i) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a north-to-south direction under the IS-93 rate, section II.A, or its successor to other entities in such hour, and (2) the ratio of Seattle's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour, and

(ii) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a south-to-

north direction under the IS-93 rate, section II.A or its successor to other entities in such hour, and (2) the ratio of Seattle's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour; provided, however, that Bonneville shall not be required to make payments for such south-to-north wheeling pursuant to this section 3(b)(1)(B)(ii) earlier than two years after the Effective Date.

Bonneville shall make payments pursuant to this subparagraph 3(b)(1)(B) in accordance with paragraph 9(f)(1).

- (C) During an outage resulting from maintenance activities on the PNW AC Intertie performed by Bonneville other than maintenance activities undertaken due to emergencies or uncontrollable forces, the following shall apply:
  - (i) When Seattle's Scheduling Share for any given hour is reduced as a consequence of such outage which reduces in Bonneville's PNW AC Intertie Operational Transfer Capability such that Seattle's Scheduling Share for such hour is less than the MW amount of the aggregate of Seattle's net firm transactions identified by Seattle to Bonneville pursuant to section 3(b)(1)(C)(iv) for such hour, Bonneville shall, subject only to sections 3(b)(1)(C)(ii) and (iii) and to the immediately succeeding sentence, wheel on a firm basis that portion of Seattle's firm transactions that equals the difference between Seattle's Scheduling Share for such hour and the

MW amount of the aggregate of Seattle's firm transactions for such hour up to, but not in excess of, Seattle's Capacity Ownership Share. Notwithstanding the foregoing, Bonneville shall only be obligated to provide such wheeling to the extent that each party with whom Seattle is conducting such firm transactions has received a sufficient AC Intertie capacity allocation in California to accommodate such transactions. Seattle shall pay the IS-93 rate, section II.A, or its successor for such wheeling pursuant to this section 3(b)(1)(C)(i) in accordance with subsection 9(d).

- (ii) Bonneville shall not be obligated to provide such wheeling to Seattle pursuant to section 3(b)(1)(C)(i) if no PNW AC Intertie Operational Transfer Capability is available to Bonneville after Bonneville has scheduled all of Bonneville's Firm Schedules. For purposes of this section, "Bonneville's Firm Schedules" shall mean schedules for assured delivery or other firm transmission contracts pursuant to the Long-Term Intertie Access Policy, as revised or amended, or its successor, and schedules for Bonneville's firm power and energy sales and exchange transactions.
- (iii) Bonneville shall not be obligated to provide such wheeling to Seattle pursuant to section 3(b)(1)(C)(i) until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to Seattle or until October 1, 1994, whichever occurs sooner.

(iv) No later than ten Working Days prior to the first day of deliveries under a firm transaction, Seattle shall identify such firm transaction to Bonneville. Seattle shall identify such firm transaction to Bonneville by providing to Bonneville a copy of Seattle's contract for such firm transaction (after information considered proprietary by Seattle has been redacted by Seattle). Bonneville shall review such contract to verify that the transaction is firm. If Seattle and its contractor represent or state in writing that the transaction set forth in their contract is firm, Bonneville shall accept that written representation or statement as dispositive of the question of whether such transaction is firm. Implementation of such procedures in this section 3(b)(1)(C)(iv) may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written.

(D) Seattle retains any and all rights of access which it would otherwise have to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(2) **Third Party Wheeling**

(A) Seattle may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by Seattle. Seattle shall have no obligation under this Agreement to make available to Bonneville any portion of Seattle's Scheduling Share which is unused in any hour, and Bonneville shall not schedule over Seattle's Scheduling Share without Seattle's prior consent.

(B) Seattle hereby waives any and all rights of access to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor; provided, however, that Bonneville may, at its option, provide Seattle with access to Bonneville's PNW-PSW Intertie pursuant to any provision of the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(C) Seattle shall provide Bonneville with the information set forth in sections 3(b)(2)(C)(i) through 3(b)(2)(C)(iii) when Seattle uses its Scheduling Share to export from the Pacific Northwest energy or power received from third parties. Such exports of energy or power on a real-time basis or for durations of less than four months are excluded from this obligation. For exports of four months or longer duration made on behalf of third parties pursuant to paragraph 3(b)(2), such information shall include:

- (i) the name and business address of the third party;
- (ii) the amount of power or energy and the duration of the transaction; and
- (iii) the name of the recipient or purchaser of such power.

Any additional information needed by Bonneville will be obtained from such third party.

4. **SCHEDULING**

- (a) Seattle (and only Seattle) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Seattle's Scheduling Share for such hour. The MW amount of Seattle's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Seattle's north-to-south schedules and south-to-north schedules (net schedules) for such hour.
  
- (b) Seattle shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1) and 4(b)(2). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours referenced in paragraphs 4(b)(1) and 4(b)(2) are Pacific Time.

(1) **Preschedules**

- (A) Bonneville shall make available to Seattle on each Working Day as soon as practicable after 0800 hours information regarding the PNW AC Intertie Operational Transfer Capability with respect to Preschedules. In the event an emergency or uncontrollable force causes a change in the PNW AC Intertie Operational Transfer Capability, Bonneville shall notify Seattle of such change as soon as practicable.
  
- (B) If Long-Term Intertie Access Policy Condition 1 Formula Allocation Procedures or their successor (Condition 1) are expected by Bonneville to become effective, Bonneville shall so notify Seattle no later than 0930 hours on the Working Day prior to the day on which Condition 1 is expected to become effective. Bonneville shall notify Seattle no later than 0930 hours on the Working Day prior to the day on which Condition 1 ceases to be in effect.

(C) Seattle shall submit its Preschedule to the Joint Intertie Scheduling Office no later than 1000 hours on each Working Day if Condition 1 is in effect. If Condition 1 is not in effect, Seattle shall submit its Preschedule to the JISO no later than 1430 hours on each Working Day.

(2) **Real-time Scheduling**

(A) Real-time Schedules shall be arranged through Bonneville's real-time scheduling office. Bonneville's real-time Scheduler shall make reasonable efforts to receive Real-time Schedules; provided, however, that Bonneville's real-time Scheduler may, but is not required to, accept Real-time Schedules between 1500 and 2200 hours on the Working Day preceding the day for which such Real-time Schedule is submitted.

(B) Real-time Schedules shall be arranged for a full hour. Arrangements shall be completed no later than 30 minutes prior to that hour.

(C) Seattle shall use best efforts to keep schedule changes to a minimum; provided, however, that for purposes of this subparagraph 4(b)(2)(C), "best efforts" shall not be deemed to refer to efforts made regardless of their economic effect.

(D) The requirements set forth in subparagraphs 4(b)(2)(B) and 4(b)(2)(C) do not preclude schedule changes at other times as may be deemed necessary by any control area operators or other entities involved in effectuating such schedule changes. Such control area operators and other entities shall be notified by Bonneville of such schedule changes as soon as practicable in accordance with Prudent Utility Practice for purposes of



coordinating ramps and proper accounting. Such schedule changes shall be deemed to occur at mid-ramp. The mid-ramp time and the integrated value for the hour shall be subject to the mutual agreement by such control area operators and other entities.

- (E) Subject to compliance with subparagraphs 4(b)(2)(A) through 4(b)(2)(D) and with other applicable PNW AC Intertie scheduling practices then in effect, Bonneville shall make Seattle's schedule change.
- (c) Bonneville shall make deliveries of power or energy to the California-Oregon border or the John Day Substation, as appropriate, pursuant to schedules submitted in accordance with this section 4; provided, however, that Bonneville shall not be required to make such deliveries in an hour to the extent that Seattle's schedule exceeds Seattle's Scheduling Share for such hour, except as may be expressly provided pursuant to subparagraph 3(b)(1)(C).

## 5. UPGRADES

- (a) Bonneville shall consult with the Committee one time each year regarding any plans for Upgrades.
- (b) Prior to the completion of an Upgrade, Bonneville shall provide to Seattle information in writing regarding estimated costs and the MW amount of such Upgrade, to the extent that such information is available to Bonneville.
- (c) As soon as practicable following the completion of an Upgrade, Bonneville shall notify Seattle in writing of the following: (1) the MW amount of such Upgrade; (2) the capital and related costs (less any amount of such costs collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, to Bonneville for completing or implementing such Upgrade; and (3) calculations of (A) Seattle's Capacity Ownership Percentage multiplied

by the MW amount of such Upgrade and (B) Seattle's Capacity Ownership Percentage multiplied by the capital and related costs, if any, to Bonneville for completing or implementing such Upgrade. Seattle may elect to acquire a share of such Upgrade in an amount up to Seattle's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade. Within 100 days from receipt of such written notice from Bonneville, Seattle shall notify Bonneville in writing of Seattle's decision regarding such acquisition. If Seattle elects to acquire, pursuant to this subsection 5(c), a portion of such Upgrade, Seattle's notice to Bonneville shall include the percentage of such Upgrade that Seattle elects to acquire (Acquisition Percentage). If Seattle fails to notify Bonneville within such 100-day period, Seattle shall be deemed to have elected not to acquire any of such Upgrade.

- (d) If Seattle elects to acquire a portion of an Upgrade pursuant to subsection 5(c), the cost to Seattle shall be Seattle's Acquisition Percentage multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such cost collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, incurred by Bonneville for completing or implementing such Upgrade. Seattle shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (e) If Seattle's Acquisition Percentage with respect to an Upgrade equals its Capacity Ownership Percentage and the Acquisition Percentage of any other Capacity Owner with respect to such Upgrade is less than its Capacity Ownership Percentage, then the following shall apply:
  - (1) Bonneville shall, in a timely manner, provide written notice simultaneously to Seattle and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage) of the MW amount equal to 100 percent of that portion of an Upgrade offered to, but not acquired by, the Capacity Owners pursuant to subsection 5(c) (Unacquired Share). If Seattle and each of such other Capacity Owners

have agreed in writing to an apportionment as among themselves of the Unacquired Share (Apportionment), Seattle may, within 45 days following receipt of such written notice from Bonneville, by written notice request Bonneville to offer in writing to Seattle such portion of the Unacquired Share as has been apportioned to Seattle pursuant to the Apportionment, and Bonneville shall offer to Seattle such portion of the Unacquired Share.

- (2) If Bonneville does not receive from Seattle and from each Capacity Owner referred to in paragraph 5(e)(1) the requests for offer pursuant to paragraph 5(e)(1) within the 45-day period specified in such paragraph, Bonneville shall, in a timely manner, offer in writing simultaneously to Seattle and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage), respectively, a portion of an Upgrade offered to, but not acquired by, the other Capacity Owners pursuant to paragraph 5(e)(1) (Second Unacquired Share) up to the "Additional Share Offered" determined as follows:

$$\text{Additional Share Offered} = (A + B) \times C$$

where: A = Seattle's Capacity Ownership Percentage.

B = Percentage equal to the sum of Capacity Ownership Percentages of Capacity Owners that acquired respectively an Acquisition Percentage equal to their Capacity Ownership Percentage.

C = Second Unacquired Share.

- (3) Within 30 days following Seattle's receipt of Bonneville's written offer pursuant to paragraph 5(e)(2), Seattle shall notify Bonneville in writing of Seattle's decision regarding acquisition of the Additional Share Offered. If Seattle fails to notify Bonneville within such 30-day period, Seattle shall be deemed to have elected not to acquire any of the Additional Share

Offered. If Seattle elects pursuant to this paragraph 5(e)(3) to acquire any or all of the Additional Share Offered, then:

- (A) Seattle shall include in its notice to Bonneville pursuant to this paragraph 5(e)(3) such share (Additional Share Acquired) of the Additional Share Offered as Seattle elects to acquire pursuant to this paragraph 5(e)(3), and
  - (B) the cost to Seattle with respect to such acquisition shall be equal to the proportion of the Additional Share Acquired to such Upgrade multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such costs collected by Bonneville through charges other than payments by Seattle pursuant to subsection 5(d) or subparagraph 5(e)(3)(B)), if any, to Bonneville for completing or implementing such Upgrade. Seattle shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (f) All capacity offered but not acquired pursuant to subsections 5(c) and (e) shall for purposes of this Agreement remain with Bonneville.
- (g) After Seattle has either accepted or declined all offers of capacity by Bonneville pursuant to subsections 5(c) and (e), Seattle's Capacity Ownership Share, Capacity Ownership Percentage, and Scheduling Percentage in Exhibit C shall be revised to reflect changes resulting from Seattle's elections pursuant to subsections 5(c) and (e). Revision of Exhibit C shall be pursuant to subsection 19(d). Exhibit G shall be revised accordingly pursuant to subsection 19(i).

## 6. **SALE OR ASSIGNMENT**

- (a) This Agreement or any interest herein shall not be transferred, sold, alienated, or assigned by Seattle to any person without Bonneville's prior and express written consent. Such consent shall not be

unreasonably withheld. In determining whether to grant its consent under this subsection 6(a), Bonneville shall take into consideration information including, but not limited to, whether the person or entity to whom this Agreement or any interest therein is proposed to be transferred, sold, alienated, or assigned is a person or entity entitled to request and receive transmission services pursuant to section 211 of the Federal Power Act, whether such person or entity can either provide its own scheduling services or has contracted with another entity to provide such scheduling services, whether such person or entity has the financial capability to meet the payment obligations under this Agreement, and whether the person or entity is either electrically interconnected to Bonneville's transmission system or has contractual arrangements for wheeling with others who are electrically interconnected to Bonneville's transmission system. This Agreement shall inure to the benefit of and be binding upon the Parties, their respective legal representatives, permitted assigns, and successors in interest. Any transfer, sale, alienation, or assignment made by Seattle in violation of this section 6 shall be void ab initio and without any force or effect whatsoever.

- (b) Bonneville hereby consents to the transfer, sale, alienation, or assignment by Seattle to any other Capacity Owner of all or part of its Capacity Ownership Share and all of Seattle's rights and obligations pursuant to this Agreement with respect thereto. Bonneville hereby further consents to the transfer, sale, alienation, or assignment by Seattle of the entire Agreement and of all of Seattle's rights and obligations under this Agreement to a Scheduling Utility.
- (c) Bonneville hereby consents to the assignment by Seattle of this Agreement or of any of Seattle's rights under this Agreement as security for any indebtedness, whether present or future, of Seattle pursuant to any mortgage, trust, security agreement or similar instrument of indebtedness (each such instrument, a Debt Instrument) made by and between Seattle and any mortgagee, trustee, secured party or holder of such instrument of indebtedness, respectively; provided, however, that if Seattle has defaulted in the

performance of its obligations under any Debt Instrument, such that the mortgagee, trustee, secured party or holder of such Debt Instrument, as the case may be, would be entitled at that time to accelerate the amount of indebtedness under such Debt Instrument, Seattle shall give Bonneville prompt written notice in reasonable detail of such default and shall, at Bonneville's election, enter into good faith discussions with Bonneville regarding the cure of such default.

- (d) If Seattle transfers, sells, alienates, or assigns, with Bonneville's consent, all or any portion of this Agreement and any rights and obligations pursuant to this Agreement to any person or party, Seattle shall give Bonneville written notice of such transfer, sale, alienation, or assignment within 10 days after the execution and delivery of the agreement effectuating such transaction by all parties to such transaction.

## **7. OPERATION, MAINTENANCE, AND MANAGEMENT**

- (a) Pursuant to the terms and conditions of the Northwest Intertie Agreements, Bonneville is the operator of the PNW AC Intertie. As such, Bonneville is responsible for the dispatch of the PNW AC Intertie in accordance with Prudent Utility Practice. Bonneville's duties as operator of the PNW AC Intertie shall include, but are not limited to, consistent with Prudent Utility Practice and Northwest Intertie Agreements: (1) determining the PNW AC Intertie Operational Transfer Capability; (2) implementing and assisting in rectifying emergency outages on the PNW AC Intertie due to system emergencies or uncontrollable forces; (3) implementing maintenance outages; and (4) giving and receiving switching orders on the PNW AC Intertie. In making any determination or in taking any other action referred to in the immediately preceding sentence, Bonneville shall give fair consideration to Seattle's interests to the extent such interests have been expressed to Bonneville in writing. Bonneville shall operate, maintain, and manage Bonneville's PNW AC Intertie,

and study, plan, and implement Upgrades, consistent with Prudent Utility Practice.

- (b) Bonneville shall determine and revise as necessary the PNW AC Intertie Rated Transfer Capability consistent with Prudent Utility Practice and engineering studies based on then existing reliability criteria developed by the North American Electric Reliability Council, the Western Systems Coordinating Council, the Northwest Power Pool, and Bonneville. In the event the PNW AC Intertie Rated Transfer Capability is changed, Bonneville shall promptly notify Seattle in writing of such change and the new PNW AC Intertie Rated Transfer Capability. If and to the extent that the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability change substantially, Bonneville shall notify Seattle in writing of such change.
  
- (c) If at any time during the Term, Bonneville's PNW AC Intertie Rated Transfer Capability becomes less than 3450 MW, or if at any time during the Term there is an imminent likelihood that Bonneville's PNW AC Intertie Rated Transfer Capability would become less than 3450 MW, then Bonneville shall reinforce the Federal Columbia River Transmission System so as to raise Bonneville's PNW AC Intertie Rated Transfer Capability to 3450 MW or otherwise to prevent Bonneville's PNW AC Intertie Rated Transfer Capability from becoming less than 3450 MW. Seattle's Capacity Ownership Share shall not be decreased on account of any failure by Bonneville to reinforce the Federal Columbia River Transmission System pursuant to this subsection 7(c).
  
- (d) In the event that Bonneville implements a Reinforcement pursuant to subsection 7(c), Bonneville shall equitably allocate the Reinforcement Cost for such Reinforcement between Bonneville and Seattle based on factors including, but not limited to, load responsibility, contractual obligation and generation integration responsibility. Any equitable allocation or agreed to allocation (pursuant to the immediately succeeding sentence) of a Reinforcement Cost pursuant to this

subsection 7(d) shall be reflected as a Reinforcement Cost in an Operating Plan proposed by Bonneville pursuant to section 13. To the extent that Bonneville and Seattle have agreed in writing to an allocation of a Reinforcement Cost incurred by Bonneville pursuant to an agreement or modification referred to in subsection 8(b), the Reinforcement Cost so allocated shall not be subject to arbitration pursuant to section 14 or section 15. Any Reinforcement Cost not allocated to Seattle pursuant to this subsection 7(d) shall not be payable by Seattle pursuant to this Agreement.

- (e) Bonneville shall provide Seattle notice of maintenance outages in accordance with the accepted standards for notice on the PNW AC Intertie. Such notice shall include an evaluation of the impact on Seattle's Scheduling Share. In scheduling or planning maintenance on PNW AC Intertie, Bonneville shall give fair consideration to Seattle's interests to the extent such interests have been expressed to Bonneville in writing.

## 8. **EXISTING AGREEMENTS**

- (a) Bonneville shall use good faith efforts to maintain in effect the Interconnection Agreement or its successor.
- (b) Bonneville shall use its best efforts to maintain Seattle's rights under this Agreement (i) by making no modification to the Northwest Intertie Agreements, (ii) by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie, and (iii) by making no modification to the agreements referred to in the immediately preceding clause (ii) that would have a substantial negative impact on Seattle's rights pursuant to sections 3, 4, 7, or to subsection 9(b), 9(c), or 11(a) without Seattle's prior written consent. Without limiting, modifying, or otherwise affecting any of its rights pursuant to sections 9, 13, 14, 15, and 16, Seattle hereby consents to Bonneville's modification of the Northwest Intertie Agreements or Bonneville's entering into other agreements or modification to such Agreements



with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification or such agreement is made or entered into by Bonneville for the purpose of performing Bonneville's obligations pursuant to subsection 7(c).

9. **PAYMENT PROVISIONS**

As full compensation for their respective payment obligations under this Agreement, Seattle shall make payments to Bonneville in accordance with the provisions of this section 9, and Bonneville shall make payments and refunds to Seattle in accordance with the provisions of this section 9.

(a) **Lump Sum Payment**

(1) As soon as practicable after the Effective Date, Bonneville shall render a bill to Seattle for the Initial Lump Sum Payment (less the negotiation deposit, if any, with applicable interest as described in section C of Exhibit D) and such bill shall include as an attachment and as part of such bill a completed section C of Exhibit D, setting forth the calculation of such Initial Lump Sum Payment due Bonneville in accordance with section IV.A of the CO-94 rate set forth in Exhibit A. Seattle shall make such payment pursuant to the CO-94 rate and the applicable GTRSPs set forth in Exhibit A. Each of Bonneville and Seattle agrees that section C of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

(2) **Calculation and Billing of the Adjusted Capacity Ownership Price**

(A) Approximately December 1995, or as soon as practicable thereafter, Bonneville shall, in accordance with section IV.B of the CO-94 rate set forth in Exhibit A, calculate the Adjusted Capacity Ownership Price to reflect actual construction costs of the facilities listed in section A of

Exhibit D and the actual AFUDC with respect to such facilities. Such calculation shall be made in accordance with column 2, section B of Exhibit D.

- (B) Promptly after Bonneville has calculated the Adjusted Capacity Ownership Price pursuant to subparagraph 9(a)(2)(A), Bonneville shall render a bill or refund voucher to Seattle, and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2), section B of Exhibit D (with a completed column 2), and a completed section D of Exhibit D reflecting the Adjusted Lump Sum Payment. If the Adjusted Lump Sum Payment is greater than the Initial Lump Sum Payment, Seattle shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in such bill, which amount shall be equal to the amount set forth on line 7, section D of Exhibit D (such amount including interest as set forth on line 6, section D of Exhibit D). If the Adjusted Lump Sum Payment is less than the Initial Lump Sum Payment, Bonneville shall pay to Seattle, within 30 days after the date of such refund voucher, the amount set forth in such refund voucher, which amount shall be equal to the amount set forth on line 7, section D, of Exhibit D (such amount including interest as set forth on line 6, section D, of Exhibit D). Each of Bonneville and Seattle agrees that sections A, B, and D of Exhibit D are consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(3) Calculation and Billing of the Revised Adjusted Capacity Ownership Price**

- (A) After payment is made by Seattle pursuant to subparagraph 9(a)(2)(B), or a refund is made by Bonneville to Seattle pursuant to subparagraph 9(a)(2)(B), Bonneville may, in accordance with the CO-94 rate set forth in Exhibit A, make one or more adjustments to the Adjusted Capacity Ownership Price; provided, that any such adjustment shall be made by Bonneville within 30 days after the date on which
- (i) Bonneville receives, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp or any other entity performing work for Bonneville on the Third AC Intertie Project, payment from Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, or
  - (ii) Bonneville pays, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, any amount to Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project; and
- provided, further, that no adjustment of the Adjusted Capacity Ownership Price or of any Revised Adjusted Capacity Ownership Price shall be made by Bonneville after December 31, 2005.
- (B) Promptly after Bonneville has calculated a Revised Adjusted Capacity Ownership Price, Bonneville shall render to Seattle a bill or refund voucher with respect to such Revised Adjusted Capacity Ownership Price and

such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), section B of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), and a completed section E of Exhibit D reflecting the current Revised Adjusted Capacity Ownership Price and the current Revised Adjusted Lump Sum Payment. If the current Revised Adjusted Lump Sum Payment with respect to such Revised Adjusted Capacity Ownership Price is greater than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, then Seattle shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in the bill referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E, of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E, of Exhibit D). If the current Revised Adjusted Lump Sum Payment is less than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, Bonneville shall pay to Seattle, within 30 days after the date of such refund voucher, the amount set forth in the refund voucher referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E of Exhibit D). Each of Bonneville and Seattle agrees

that section E of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

- (4) For purposes of implementing the CO-94 rate, the following shall apply:
- (A) the calculations pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the adjustment "to reflect the difference between the actual and the estimated Capacity Ownership Price" required under section IV.B of the CO-94 rate;
  - (B) the calculations of interest pursuant to footnote 2 of section D of Exhibit D and footnote 2 of section E of Exhibit D shall be deemed to be the computation of "interest using the weighted average interest rate on Bonneville's outstanding bonds" required pursuant to section IV.B of the CO-94 rate;
  - (C) the calculations of the Adjusted Capacity Ownership Price and of the Revised Adjusted Capacity Ownership Price pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the determination of the "actual Capacity Ownership Price" required pursuant to section IV.B of the CO-94 rate;
  - (D) as used in the CO-94 rate, the terms "Bonneville's PNW AC Intertie," "PNW AC Intertie," "Third AC Intertie," "Third AC Intertie Project," and "Third AC Intertie System Reinforcement" shall be deemed to have the respective meanings of such terms set forth in section 1;
  - (E) as used in the CO-94 rate, the term "Capacity Ownership Share" shall be deemed to mean "Capacity Ownership Percentage" as defined in section 1;

- (F) the indirect costs and overhead costs described in footnote 5 of section B of Exhibit D shall be deemed to be the indirect costs and overhead costs referred to in section III.A of the CO-94 rate; and
- (G) the last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

- (5) For purposes of application of the CO-94 rate set forth in Exhibit A, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (A) section I;
  - (B) section III.A;
  - (C) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
  - (D) subsection 4 of section IV.A;
  - (E) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A; and

- (F) for purposes of subsection 16(e) of this Agreement and as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

**(b) Annual Charges**

**(1) Payments Pursuant to AC-93 Rate**

- (A) From and after the first Working Day after Bonneville receives payment from Seattle pursuant to paragraph 9(a)(1), Bonneville shall bill Seattle on the monthly power bill in accordance with the AC-93 rate set forth in Exhibit A. Seattle shall pay such bill in accordance with the applicable GTRSPs set forth in Exhibit A.

- (B) For purposes of application of the AC-93 rate, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:

- (i) section I;
- (ii) section III.A;
- (iii) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
- (iv) the first sentence of subsection 3 of section IV.A;
- (v) subsection 4 of section IV.A;

- (vi) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A;
- (vii) the first paragraph of subsection 6 of section IV.A; and
- (viii) as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

(C) The last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

(D) Bonneville hereby agrees that the provisions of the AC-93 rate shall have no application or effect with respect to the following:

- (i) any replacement of the series capacitor banks containing polychlorinated biphenyl at the Sand Springs, Sycan and Fort Rock Substations; and
- (ii) any replacement commenced prior to the Effective Date or not completed prior to September 30, 1995.



- (E) Upon and after the effective date of the annual costs rate set forth in Exhibit B, Bonneville shall cease billing Seattle pursuant to the AC-93 rate.

(2) **Payments Pursuant to Annual Costs Rate**

From and after the date the annual costs rate set forth in Exhibit B becomes effective, the following shall apply:

(A) **Operations Costs, Maintenance Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs**

- (i) During each fiscal year during the Term, Bonneville shall bill Seattle on the monthly power bill, and Seattle shall pay, pursuant to Exhibit B, forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for such fiscal year. Such costs shall be, respectively, the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the fiscal year in which such month occurs.
- (ii) Within eight months after the end of each fiscal year during the Term (such fiscal year being hereinafter referred to as a "Fiscal Year"), Bonneville shall determine and calculate, pursuant to Exhibit I, Schedules A, B, D, E, F, G, and H, actual Operations Costs, actual

Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year most recently ended.

- (iii) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year is greater than the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year, Bonneville shall refund to Seattle the difference between such forecast costs and such actual costs as a lump sum payment, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Bonneville shall, promptly following the date on which the calculation of such difference is made, provide Seattle written notice of such refund. Within the 30-day period referred to in the first sentence of this section 9(b)(2)(A)(iii), Bonneville shall provide to Seattle an Operating Plan amended in accordance with subsection 13(k) containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast

Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (iv) If, based on the calculation performed pursuant to subparagraph 9(b)(2)(A)(ii), the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is equal to or less than 105 percent, but greater than 100 percent, of the sum of the forecast Operations costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs in the Operating Plan for the Fiscal Year, Bonneville shall bill to Seattle on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Seattle shall pay such bill in accordance with the Billing Provisions. Within the 30-day period referred to in the immediately preceding sentence, Bonneville shall provide to Seattle an amended Operating Plan containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant

Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (v) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the actual Operations Cost, actual Maintenance Cost, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is greater than 105 percent of the sum of the forecast Operations Cost, forecast Maintenance Cost, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year, Bonneville shall bill to Seattle on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Seattle shall pay such bill in accordance with the Billing Provisions; provided, however, that Bonneville shall not bill Seattle pursuant to this section 9(b)(2)(A)(v) any amount which exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year unless and until such amount which exceeds 100 percent of

the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year has been included in an Operating Plan amended pursuant to subsection 13(k).

- (vi) Simple interest shall be accrued on payments or refunds due pursuant to this paragraph 9(b)(2) with respect to any fiscal year during the Term using the weighted average interest rate on Bonneville's outstanding bonds or other debt instruments then used by Bonneville and such interest shall accrue from (and including) the date of the last day of such fiscal year to (but excluding) the date of refund to Seattle or to (but excluding) the due date of a payment due Bonneville.

**(B) Replacement Cost and Reinforcement Cost**

Bonneville shall bill Seattle on the monthly power bill Replacement Costs for any Replacement and Reinforcement Costs for any Reinforcement. Bonneville shall render such bill within 15 months following the date on which the project work order for such Replacement or such Reinforcement, as the case may be, is closed. Seattle shall pay such bill pursuant to Exhibit B and sections 9(b)(2)(B)(i), 9(b)(2)(B)(ii), 9(b)(2)(B)(iii) and 9(b)(2)(B)(iv).

- (i) If the forecast Replacement Cost for a Replacement is greater than the actual Replacement Cost for such Replacement or if the

forecast Reinforcement Cost for a Reinforcement is greater than the actual Reinforcement Cost for such Reinforcement, Bonneville shall bill Seattle the actual Replacement Cost for such Replacement or the actual Reinforcement Cost for such Reinforcement, as the case may be. Bonneville shall provide to Seattle an Operating Plan amended in accordance with subsection 13(k) containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement, as the case may be.

- (ii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is equal to or less than 105 percent, but greater than 100 percent, of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Seattle such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Seattle shall pay such bill pursuant to subparagraph 9(b)(2)(B). Bonneville shall provide to Seattle an amended Operating Plan containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the difference between the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement.
- (iii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is greater than 105 percent

of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Seattle such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Seattle shall pay such bill pursuant to subparagraph 9(b)(2)(B); provided, however, that Bonneville shall not bill Seattle pursuant to this subparagraph 9(b)(2)(B) any amount which exceeds 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, as the case may be, unless and until such amount which exceeds 100 percent of such forecast Replacement or such forecast Reinforcement Cost, as the case may be, has been included in an amended Operating Plan pursuant to subsection 13(k).

- (iv) Charges pursuant to sections 9(b)(2)(B)(i), (ii) and (iii) for Replacement Costs and Reinforcement Costs shall accrue simple interest pursuant to section III.D of Exhibit I.

(c) **Upgrade Charges**

For purposes of implementing the CO-94 rate, the following shall apply:

- (1) as used in the CO-94 rate, the term "upgrade" shall be deemed to mean "Upgrade" as defined in section 1, the term "rated transfer capability" shall be deemed to mean "PNW AC Intertie Rated Transfer Capability" as defined in section 1 and the term "AFUDC" shall be deemed to have the meaning set forth for such term in section 1;
- (2) the "Capacity Ownership Share of the capital and related cost of the upgrade," referred to in section III.B of the CO-94 rate

shall be deemed to be the costs pursuant to subsection 5(d) and subparagraph 5(e)(3)(B), as applicable; and

- (3) "construction costs (including direct, indirect and overhead costs) and AFUDC" referred to in section III.B of the CO-94 rate and "related costs" referred to in section III.B of the CO-94 rate together shall be deemed to be Upgrade costs and shall be determined in the same manner in which Replacement Costs are determined pursuant to section III of Exhibit I; provided, however, that expenses that are properly allocable to an Upgrade (i.e., "related costs" referred to in section III.B of the CO-94 rate) in accordance with generally accepted accounting principles (as defined in Exhibit I) may be included by Bonneville in Upgrade costs for such Upgrade.

**(d) Payments of Charges Pursuant to Section 3(b)(1)(C)(i)**

Bonneville shall bill Seattle for wheeling provided pursuant to section 3(b)(1)(C)(i) on Seattle's monthly power bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A and Seattle shall pay such bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A; provided, however, that under any successor to the IS-93 rate, Seattle shall not be obligated to pay any rate or charge greater than the rate or charge payable by any other party to which Bonneville provides nonfirm wheeling services on Bonneville's PNW AC Intertie for such party's nonfirm transaction of a duration similar to Seattle's wheeling transaction pursuant to section 3(b)(1)(C)(i).

**(e) Suspension for Failure to Perform**

- (1) If at any time during the term of this Agreement Bonneville does not receive payment due and owing to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d), Bonneville shall be entitled to suspend performance of its obligations to Seattle pursuant to section 4 without incurring



any liability to Seattle therefor; provided, that Bonneville shall not be entitled to suspend performance pursuant to this paragraph 9(e)(1) earlier than five Working Days following receipt from Bonneville by Seattle of written notice of such suspension. Such suspension shall continue in effect until the next Working Day following the Working Day on which Seattle makes payment in full to Bonneville of the balance owed to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d). During the period of such suspension, Seattle shall not be entitled to participate through the Committee in any review of an Operating Plan commenced by the Committee pursuant to section 13 during such period of suspension, or to participate in any arbitration commenced by the Committee pursuant to sections 14 and 15 during such period of suspension, or to participate in any audit commenced by the Committee pursuant to section 16 during such period of suspension.

- (2) If during any period in any month Bonneville fails to make deliveries in accordance with subsection 4(c), Seattle shall be entitled, without incurring any liability to Bonneville therefor, to delay any payment due and owing to Bonneville by Seattle pursuant to subsection 9(b) or 9(d) for a period, equal to the period during which Bonneville failed to make such deliveries, commencing on the date the monthly power bill for such month would otherwise be payable by Seattle pursuant to this Agreement; provided, however that Seattle's entitlement pursuant to this paragraph 9(e)(2) shall apply only with respect to the amount of such monthly power bill to be paid directly to Bonneville or its agent.

**(f) Payments or Refunds by Bonneville**

- (1) Bonneville shall make any payment to Seattle pursuant to subparagraph 3(b)(1)(B) within 30 days following the end of the

month in which such payment becomes due to Seattle pursuant to subparagraph 3(b)(1)(B).

- (2) Bonneville shall pay to Seattle, in a lump sum, any refund due to Seattle pursuant to subsection 16(e) or paragraph 16(f)(2) within 30 days following the date on which such refund becomes due to Seattle pursuant to subsection 16(e) or paragraph 16(f)(2), respectively.
- (3) Bonneville shall pay any refund, credit, or payment due to Seattle under section 18 pursuant to the terms and conditions set forth in section 18.
- (4) Each payment, credit or refund due to Seattle by Bonneville pursuant to this Agreement shall be made by Bonneville, at Bonneville's option, (A) by check payable to the order of Seattle, (B) by electronic funds transfer of immediately available funds into such account as may be designated in writing by Seattle from time to time for such purpose or (C) by crediting the amount of such payment, credit or refund on Seattle's power bill.

## 10. TRANSMISSION LOSSES

- (a) To compensate Bonneville for transmission losses incurred by Bonneville in making deliveries scheduled by Seattle pursuant to this Agreement, Seattle shall make available, or arrange to have made available, to Bonneville, at any point mutually acceptable to the Parties at which the respective electric systems of Seattle and Bonneville are interconnected, on the corresponding hour 168 hours later or on another hour to be agreed upon, the amounts of electric power equal to Seattle's net PNW AC Intertie schedule multiplied by the appropriate loss factor specified in Exhibit E. Seattle's net PNW AC Intertie schedule shall be, for any given hour, the absolute value of the sum of Seattle's north-to-south schedules (positive) and south-to-north schedules (negative) for such hour.

- (b) Upon the conclusion of any review by Bonneville of the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan provided to the Committee pursuant to section 13. The Committee may make recommendations regarding such results and any revisions to the loss factor in Exhibit E, Part A. Only recommendations regarding assumptions (including, without limitation, data inputs and source of data) made by Bonneville in its review or revision of the loss factor in Exhibit E, Part A, and recommendations regarding the results of such review or revision shall be subject to arbitration pursuant to section 14.
- (c) Seattle's Scheduling Share shall not be reduced by any amount of losses returned to Bonneville pursuant to subsection 10(a).

## 11. **REMEDIAL ACTIONS**

### (a) **Bonneville's Responsibilities**

- (1) Within five days after the Effective Date, Bonneville shall notify Seattle in writing of the plan for remedial actions required to maintain the PNW AC Intertie Rated Transfer Capability, which plan shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice. If and to the extent that such plan is amended, modified, or replaced, Bonneville shall, promptly following such amendment, modification, or replacement, provide written notice to Seattle of such amendment, modification, or replacement, as the case may be. Bonneville shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, required to maintain the portion of Bonneville's PNW AC Intertie Rated Transfer Capability not purchased by

Capacity Owners. Such remedial actions shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice.

- (2) Bonneville shall be responsible for generating appropriate control signals for transmission to Seattle for purposes of effectuating remedial actions pursuant to this section.

(b) **Seattle's Responsibilities**

- (1) Seattle shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other remedial actions required to maintain Seattle's Capacity Ownership Share. Such remedial actions shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1) and Prudent Utility Practice. Bonneville may perform engineering analyses to confirm Seattle's providing capability to arm and having available appropriate remedial actions pursuant to this paragraph 11(b)(1).
- (2) In any given hour, Seattle shall be responsible for providing sufficient remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, to maintain Seattle's schedule on the PNW AC Intertie for such hour. To the extent that load tripping or generator dropping is required as a remedial action by Seattle pursuant to this paragraph 11(b)(2) in any given hour, the required amount of such load tripping or such generator dropping shall be determined by dividing the amount of power scheduled by Seattle on Seattle's Scheduling Share in such hour by the total amount of power scheduled on the PNW AC Intertie in such hour and multiplying the result by the total amount of generation or load (in MW) to be armed for the PNW AC Intertie in such hour.

- (3) Seattle shall provide, design, operate, and maintain the necessary equipment to accept control signals from Bonneville and to transmit such signals to Seattle's generator dropping, load tripping, or other remedial action sites, and to arm and initiate the appropriate control action(s). Such design, operation, and maintenance shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1), and Prudent Utility Practice.
- (4) Seattle and Bonneville may mutually agree that Bonneville will, pursuant to terms and conditions mutually acceptable to the Parties, provide the remedial actions required of Seattle pursuant to subsection 11(b).

## 12. **CAPACITY OWNERS' COMMITTEE**

### (a) **Composition of Committee**

Seattle may appoint one representative (and an alternate who may act in the absence of such representative) as a member of the Capacity Owners' Committee (Committee). If during any period Seattle fails to appoint a representative to the Committee, Seattle waives any and all rights during such period that would otherwise have accrued to it, individually or as a member of the Committee, pursuant to sections 12, 13, 14, 15, and 16 of this Agreement. Seattle hereby appoints as its representative pursuant to this subsection the following representative and alternate to the Committee:

Representative: Director, Power Management Division

Alternate: Manager, Resource Operations

### (b) **Convening Meetings**

- (1) Any Capacity Owner that has appointed a representative to the Committee may convene a meeting of the Committee

pursuant to the procedures set forth in subsection 12(e). The Capacity Owner convening a Committee meeting shall be responsible for preparing any necessary notices, identifying the subject matter and issues to be discussed, and transmitting notices and relevant documents to the other Committee members and, if appropriate, to Bonneville.

- (2) At the written request of any Capacity Owner that has appointed a representative to the Committee, Bonneville shall attend Committee meetings.
- (3) The Committee may conduct business only at a properly convened meeting at which a quorum, as defined in subsection 12(c), is present. The Committee shall make or convey any request, designation, recommendation, notice, appointment, submission, audit report or exception, or statement to which Bonneville is required to respond or which creates or triggers an obligation of Bonneville, pursuant to this Agreement, only upon a decision of the Committee made at a properly convened meeting at which a quorum is present.
- (4) Each fiscal year, Bonneville shall convene an annual meeting of the Committee. The purpose of such annual meeting shall be to discuss the Operating Plan delivered, pursuant to subsection 13(b), to each Capacity Owner that has appointed a representative to the Committee. Bonneville shall convene such annual meeting no earlier than 15 days, but no later than 30 days, following the date of such delivery of the Operating Plan.
- (5) In addition to the meeting referred to in paragraph 12(b)(4), Bonneville may, at its discretion, convene meetings of the Committee, pursuant to the procedures set forth in subsection 12(e), to present to the Committee any information Bonneville deems relevant.

(c) **Meeting Quorum**

The respective representatives of all of the Capacity Owners that have appointed a representative to the Committee, less one, shall constitute a quorum.

(d) **Meetings by Telephone Conference**

Committee meetings pursuant to the Capacity Ownership Agreements may be conducted by telephone provided all Capacity Owners and, if appropriate, Bonneville, are notified pursuant to the procedures set forth in subsection 12(e) of any such meeting.

(e) **Meeting Notices**

- (1) All Committee meeting notices pursuant to the Capacity Ownership Agreements shall be provided in writing no less than 14 days prior to such meeting.
- (2) Any Committee meeting notice required by this section shall be deemed properly made if delivered in person, by electronic facsimile, or by mail or other qualified delivery service, postage prepaid, to the person specified below:

If to Bonneville:

Group Vice President for Marketing, Conservation and  
Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232  
Telephone (503) 230-5152  
Facsimile (503) 230-5207

**If to Puget:**

Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515  
Telephone (206) 462-3137  
Facsimile (206) 462-3175

**If to Seattle:**

Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101  
Telephone (206) 386-4530  
Facsimile (206) 386-4955

**If to PNGC:**

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232  
Telephone (503) 288-1234  
Facsimile (503) 288-2334

**If to Snohomish:**

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201  
Telephone (206) 258-8211  
Facsimile (206) 258-8305



If to Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411  
Telephone (206) 502-8294  
Facsimile (206) 502-8628

Attendance at a meeting by a representative of a Capacity Owner constitutes waiver by such Capacity Owner of notice of such meeting.

- (3) Either Party may, by written notice to the other Party and to the Capacity Owners other than Seattle, change the designation, address, or facsimile number of the person so specified by it in subsection 12(a) or paragraph 12(e)(2).

**13. OPERATING PLAN AND AMENDMENTS TO THE OPERATING PLAN**

- (a) The provisions of this section shall become effective commencing August 1, 1995; provided, however, that unless and until the annual costs rate set forth in Exhibit B is approved by FERC on an interim basis, Bonneville shall not have any right pursuant to this Agreement to bill or charge to Seattle, and Seattle shall not have any obligation pursuant to this Agreement to pay to Bonneville, any amount pursuant to any Operating Plan.
- (b) **Delivery of Operating Plan**
  - (1) On or before August 1, 1995, Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1996 and an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1997.

- (2) Not later than one year preceding the first day of each fiscal year, other than the fiscal years specified in paragraph 13(b)(1), Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for such fiscal year.
- (c) Each Operating Plan delivered pursuant to subsection 13(b) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast costs for the fiscal year to which such Operating Plan pertains, and such Operating Plan may contain such other information as Bonneville may deem relevant; and each amendment of an Operating Plan delivered pursuant to subsection 13(k) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast or actual costs, as appropriate, for the fiscal year to which such Operating Plan pertains, and such amendment may contain such other information as Bonneville may deem relevant:
- (1) a forecast of, or the actual, Allocated Direct Cost of Operations Cost (pursuant to section I.C of Exhibit I), Indirect Cost of Operations Cost (pursuant to section I.D of Exhibit I), and Overhead Cost of Operations Cost (pursuant to section I.E of Exhibit I) in the format set forth in Exhibit I, Schedule A;
- (2) a forecast of, or the actual, Direct Cost of Maintenance Cost (pursuant to section II.B of Exhibit I), Indirect Cost of Maintenance Cost (pursuant to section II.D of Exhibit I), and Overhead Cost of Maintenance Cost (pursuant to section II.E of Exhibit I) in the format set forth in Exhibit I, Schedule B;
- (3) a forecast of, or the actual, Direct Cost of Replacements and Reinforcements (pursuant to section III.A of Exhibit I), Indirect Cost and Overhead Cost of Replacements and Reinforcements (pursuant to section III.B of Exhibit I), and AFUDC of Replacements and Reinforcements (pursuant to section III.C of Exhibit I) in the format set forth in Exhibit I, Schedule C, for

each Reinforcement and Replacement which is expected to be, in the fiscal year to which the Operating Plan pertains, a planned new start, construction work in progress on a previously initiated Reinforcement or Replacement, as the case may be, or a closed work order. The forecast shall include for each such Reinforcement or Replacement an estimate of the total cost of construction and the cost to be incurred with respect to such Reinforcement or Replacement during each fiscal year until the work order for such Reinforcement or Replacement has been closed. Bonneville may elect, but shall not be required, to include in any such forecast the information set forth in the immediately preceding sentence regarding any Replacement and Reinforcement which is expected to be planned a new start in any fiscal year following the fiscal year to which the Operating Plan pertains. In the event Bonneville elects to forecast Direct Cost, Indirect Cost, and Overhead Cost of any Reinforcement or Replacement which is expected to be a planned new start in any fiscal year subsequent to the fiscal year to which the Operating Plan pertains, Bonneville shall provide to the Committee such forecast costs, in the format set forth in Exhibit I, Schedule C (together with additional information pertinent to such forecast costs as required by paragraph 13(c)(9)), 30 days prior to the date such Operating Plan is delivered to the Committee pursuant to subsection 13(b). In addition, Bonneville shall include such forecast costs in the Operating Plan delivered to the Committee pursuant to subsection 13(b);

- (4) the General Plant Cost (pursuant to section IV of Exhibit I) in the format set forth in Exhibit I, Schedule D;
- (5) a forecast of, or the actual, Other Costs (pursuant to section V of Exhibit I) in the format set forth in Exhibit I, Schedule E;

- (6) a forecast of, or the actual, **Contracts and Rates Costs** (pursuant to section VI of Exhibit I) in the format set forth in Exhibit I, Schedule F;
- (7) a forecast of, or the actual, **Power Scheduling Costs** (pursuant to section VII of Exhibit I) in the format set forth in Exhibit I, Schedule G;
- (8) a forecast of, or the actual, **End of Term Costs** (pursuant to section VIII of Exhibit I) in the format set forth in Exhibit I, Schedule H. Such forecast shall include Bonneville's proposed apportionment of such End of Term Costs among Seattle and Capacity Owners other than Seattle and Bonneville's rationale for such apportionment;
- (9) additional information pertinent to the forecast costs, actual costs, and General Plant Cost provided pursuant to paragraphs 13(c)(1) through 13(c)(8), including, without limitation, descriptions of the activities or projects and explanations of the costs comprising the Direct Cost components of such forecast costs, actual costs, and General Plant Cost, and explanations of MFU counts; and
- (10) if Bonneville has reviewed the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), the Operating Plan shall contain the results of such review, including any revision to the loss factor in Exhibit E, Part A, pursuant to subsection 10(b), and any additional information pertinent to such review.

(d) **Requests by Committee**

- (1) No later than 15 days after the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), the Committee may make a single request of Bonneville in writing for:

- (A) such supporting documentation, data, and information as may be reasonably necessary to analyze (i) the Operating Plan, or its constituent parts, delivered to the Committee pursuant to subsection 13(b), or (ii) any amendment to an Operating Plan pursuant to subsection 13(k); and
- (B) such documentation, data, and information relating to Bonneville's present or past activities or practices concerning Bonneville's PNW AC Intertie and to alternatives considered by Bonneville to costs or activities described in the Operating Plan or any amendment to an Operating Plan as may be reasonably necessary for the Committee to formulate recommendations pursuant to subsection 13(e);

provided, however, that with regard to requests for documentation, data, and information pursuant to this paragraph 13(d)(1), the Committee must designate in such request the specific item in the Operating Plan or in any amendment to an Operating Plan to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information. Such single request may contain multiple parts.

- (2) The Committee shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to paragraph 13(d)(1).
- (3) Bonneville shall have 20 days from the date it receives any request pursuant to paragraph 13(d)(1) to provide the documentation, data, and information requested; provided, however, that Bonneville shall be under no obligation (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily

available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Committee, or (D) to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or any regulation and Executive Order applicable to Bonneville.

- (4) The Committee in such request shall designate one of its members to be its representative for the sole purpose of receiving such documentation, data, or information from Bonneville pursuant to this subsection 13(d). Bonneville shall deliver such documentation, data, or information to the representative designated by the Committee to receive such materials.
  - (5) For purposes of this subsection 13(d) and subsection 13(f), each of Bonneville and the Committee shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests for, documentation, data, and information and responses to such requests.
- (e) The Committee shall have 20 days from the date on which it receives documentation, data, or information from Bonneville pursuant to subsection 13(d) or, if none was requested, 50 days from the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), whichever date is later, to recommend to Bonneville in writing a revision or revisions to any forecast cost or General Plant Cost in the Operating Plan. The Committee shall have the time periods set forth in subsection 13(m) to recommend to Bonneville in writing a revision or revisions to a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan. Such recommendation shall set forth, at a minimum, the exact revisions to the forecast cost or General Plant Cost proposed by the Committee

and the reasons for such revisions. Failure of the Committee to recommend a revision or revisions to all or any portion of a forecast cost or General Plant Cost in the Operating Plan or a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan within the applicable time limit set forth above shall be deemed to constitute acceptance by the Committee of all portions of the forecast costs and General Plant Cost of the Operating Plan for which the Committee has not recommended a revision.

- (f) No later than 15 days after receipt of a Committee recommendation made pursuant to subsection 13(e), Bonneville may make a single request (which may contain multiple parts) in writing of the Committee for such supporting documentation, data, and information as may be reasonably necessary to analyze the Committee's recommendation, including without limitation, any estimated costs or forecast costs contained in such recommendation; provided, however, that the Capacity Owners that have appointed a representative to the Committee shall be under no obligation (1) to create additional documentation, data, or information, (2) to provide documentation, data, or information that is not readily available to the Committee or to any Capacity Owner that has appointed a member to the Committee, (3) to provide to Bonneville documentation, data, or information that the Committee has previously provided to Bonneville; provided, further, that with regard to requests for documentation, data, and information pursuant to this subsection 13(f), (1) Bonneville must designate in such request the specific item in the Committee's recommendation to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information, and (2) Bonneville shall use reasonable efforts, consistent with Bonneville's needs as set forth in this subsection 13(f), to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to this subsection. Such single request shall be made of the Committee by delivering a copy of the request to each Capacity Owner that has appointed a representative to the Committee. The Committee shall have 20 days from the date of its

receipt of Bonneville's request to provide a single response containing the documentation, data, and information requested.

- (g) If the Committee makes any recommendation in writing pursuant to subsection 13(e), Bonneville shall have the greater of 15 days from the date of receipt of the requested documentation, data, and information requested pursuant to subsection 13(f) or, if none was requested, 30 days from the date of receipt of the Committee's recommendations made pursuant to subsection 13(e) to, by written notice to each Capacity Owner that has appointed a representative to the Committee, accept the recommendation, accept the recommendation in part, reject the recommendation, or propose an action that is responsive to the Committee's recommendation and that is different from Bonneville's proposal contained in the Operating Plan. If Bonneville makes such a proposal, Bonneville shall set forth in such written notice the exact revisions to the Operating Plan. The Committee shall have 7 days from the date of receipt of Bonneville's proposal to make any requests in writing for supporting documentation, data, and information as set forth in subsection 13(d). Bonneville shall have 7 days to respond to those requests as set forth in subsection 13(d). Failure of Bonneville to respond in writing to any recommendation of the Committee within the applicable time period set forth in this subsection 13(g) shall be deemed to constitute rejection of such recommendation.
  
- (h) If Bonneville rejects all or any portion of the Committee's recommendation, or if the Committee elects not to accept a proposal made by Bonneville pursuant to subsection 13(g), then the Committee may
  - (1) elect by written notice to Bonneville to refer to binding arbitration, pursuant to section 14 and consistent with subsections 13(i) and 14(b), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which



Bonneville responded with a proposal pursuant to subsection 13(g); and

- (2) elect by written notice to Bonneville to refer to nonbinding arbitration pursuant to section 15 and consistent with subsections 15(a) and 15(d), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g).

**Failure of the Committee to elect to refer to arbitration**

- (A) such portion of any recommendation of the Committee not accepted by Bonneville within 15 days following Bonneville's rejection or acceptance in part of such recommendation of the Committee pursuant to subsection 13(g), or
- (B) any proposal made by Bonneville pursuant to subsection 13(g) within 15 days following Bonneville's written notice of such proposal or, if documentation, data, or information was requested by the Committee pursuant to subsection 13(g), within 15 days following receipt by the Committee of such documentation, data, or information pursuant to subsection 13(g),

shall be deemed to constitute acceptance by the Committee of Bonneville's rejection or acceptance in part of the recommendation of the Committee or of Bonneville's proposal and waiver by the Committee of any right pursuant to this section 13 or to section 15 to arbitrate such recommendation or portion thereof.

- (i) The Committee may, subject to the immediately succeeding sentence, arbitrate, pursuant to subsection 13(h), any recommendation by the Committee concerning a revision pursuant to this Agreement to a loss factor set forth in any Operating Plan or in any amendment to an

Operating Plan or concerning any forecast cost or actual (allocated or otherwise) cost set forth in any Operating Plan or in any amendment to an Operating Plan (including the following costs and related items set forth in any Operating Plan, or in any amendment to an Operating Plan, pursuant to Exhibit I, Schedule A, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; Exhibit I, Schedule B, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; Exhibit I, Schedule C, lines 1, 2, 3, 4 and 5; Exhibit I, Schedule D, lines 3, 4, 5, 6, 7, 8, 9, 10 and 11; Exhibit I, Schedule E, lines 2 and 3; Exhibit I, Schedule F, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; Exhibit I, Schedule G, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; and Exhibit I, Schedule H, lines 1, 2, 3, and 4). The Committee's right pursuant to this subsection 13(i) to arbitrate any such recommendation shall be subject to the following limitations:

- (1) if such recommendation, or portion thereof, includes a Replacement Cost for a Replacement or a Reinforcement Cost for a Reinforcement, and such Replacement Cost or Reinforcement Cost was included in a previous Operating Plan (either of such costs, a Previous Operating Plan Cost), the Committee may arbitrate pursuant to this subsection 13(i) such recommendation, or portion thereof, only to the extent that such recommendation, or portion thereof, includes any Replacement Cost or Reinforcement Cost in excess of the Previous Operating Plan Cost;
- (2) the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, pertaining to a revision to a loss factor pursuant to this Agreement only to the extent such arbitration is permitted by subsection 10(b);
- (3) the Committee may arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning an Other Cost only to the extent that such Other Cost is a cost set forth in an Operating Plan or amendment to an Operating Plan pursuant to Exhibit I, Schedule E, line 2 and such recommendation, or portion thereof pertains to whether such

Other Cost is properly allocated to Bonneville's PNW AC Intertie pursuant to Exhibit I, section V;

- (4) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in such Operating Plan or in any amendment to an Operating Plan, the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan only to the extent that such actual cost exceeds 105 percent of the forecast cost for such activity or such project; provided, however, that, without limiting any of Seattle's rights and benefits pursuant to subsection 16(c), the Committee may not arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan or in any amendment to an Operating Plan if such actual cost is less than 105 percent of the forecast for such activity or such project;
- (5) the Committee may not arbitrate, pursuant to this subsection 13(i), (a) the allocation by Bonneville pursuant to this Agreement of any of its costs to overall overhead costs or to overall indirect costs, or (b) the allocation by Bonneville pursuant to this Agreement of a portion of Bonneville's overall overhead costs and overall indirect costs to its total system operations costs, its total system maintenance costs, its total capital costs or its total indirect and overhead power scheduling costs; provided, however, that nothing in this paragraph (5) shall be deemed to prevent or restrict the

Committee from arbitrating pursuant to this subsection 13(i) the level (rather than the allocation) of any of Bonneville's Exhibit I, Schedule A, line 9 total system operations indirect costs and line 11 total system operations overhead costs; Bonneville's Exhibit I, Schedule B, line 11 total system maintenance indirect costs and line 13 total system maintenance overhead costs; Bonneville's total capital costs; Bonneville's Exhibit I, Schedule F, line 6 total indirect contracts and rates costs and Bonneville's Exhibit I, Schedule F, line 7 total overhead contracts and rates costs; or Bonneville's Exhibit I, Schedule G, line 6 total indirect power scheduling costs and Bonneville's Exhibit I, Schedule G, line 7 total overhead power scheduling costs;

- (6) the Committee may not arbitrate any recommendation, or any portion thereof, regarding any amendment to an Operating Plan made pursuant to sections 9(b)(2)(A)(iv) and 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2);
- (7) the Committee may not arbitrate any such recommendation, or portion thereof, to the extent that in doing so the arbitrators would be required to decide a matter of law in order to render a decision pursuant to subsection 14(h). If, subsequent to the Effective Date, Bonneville is given legal authority to submit to binding arbitration matters of law, Bonneville shall enter into good faith negotiations with Seattle and Capacity Owners other than Seattle regarding a revision to this paragraph 13(i)(7) enabling arbitration of matters of law pursuant to this subsection 13(i) consistent with such legal authority; and
- (8) the Committee may not arbitrate any recommendation, or portion thereof, regarding an allocation of a Reinforcement Cost to the extent prohibited by subsection 7(d).

In arbitrating any recommendation, or portion thereof, pursuant to this subsection 13(i), the Committee may raise in support of such

recommendation arguments regarding whether any forecast or actual cost should be based upon activities different in degree, but not in kind, from the activities upon which such forecast or actual cost in the Operating Plan is based.

- (j) Each Operating Plan provided pursuant to subsection 13(b) which has completed the Committee review process set forth in subsections 13(d) through 13(g) shall take effect on the first day of the fiscal year to which such Operating Plan pertains and shall remain in effect for the duration of such fiscal year.
- (k) At any time during the fiscal year in which an Operating Plan is in effect, or within 8 months after the end of such fiscal year, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast or actual Operations Cost, Maintenance Cost, General Plant Cost, Other Cost, Contracts and Rates Cost, Power Scheduling Cost, or End of Term Cost in such Operating Plan. At any time during the fiscal year an Operating Plan is in effect, or within 30 months after a work order for a Replacement or Reinforcement is closed, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast cost or actual cost component for such Replacement or Reinforcement.
- (l) Any amendment made to any Operating Plan pursuant to subsection 13(k) shall be provided by delivery of a copy in writing of such amendment by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (m) Consideration of amendments to the Operating Plan pursuant to subsection 13(l) shall be consistent with the procedures set forth above in subsections 13(c) through 13(k), except that the time limits set forth in such subsections shall be reduced as follows: 15 days shall be 7 days, 20 days shall be 10 days, 30 days shall be 15 days, and 50 days shall be 25 days. For purposes of computing the time limits in this subsection 13(m), the date Bonneville provides the Capacity Owners

with a proposed amendment, pursuant to subsection 13(k), shall be deemed to be the date the annual meeting was convened for purposes of paragraph 13(d)(1) and subsection 13(e).

- (n) Without limiting any of Seattle's rights and benefits pursuant to subsection 13(i) and sections 14 and 15, any Operating Plan amended pursuant to section 9(b)(2)(A)(v) or 9(b)(2)(B)(iii), or subsection 13(k) shall take effect when such amendment is accepted by the Committee pursuant to subsection 13(e) or 13(h). Any Operating Plan amended pursuant to section 9(b)(2)(A)(iii), 9(b)(2)(A)(iv), 9(b)(2)(B)(i), or 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2) shall take effect as soon as such amendment is delivered by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (o) An Operating Plan shall, during the fiscal year in which such Operating Plan is in effect, establish the costs which Seattle is obligated to pay pursuant to the terms and conditions of this Agreement. In no event shall such Operating Plan, or any portion thereof, contain or constitute an obligation of Bonneville to undertake, or to expend funds on, activities described or indicated in such Operating Plan.

#### **14. ARBITRATION**

- (a) During any arbitration process conducted pursuant to this section 14, Seattle shall act through the Committee. Each of Bonneville and Seattle agrees to be bound by any decision rendered by the arbitrators in any arbitration brought pursuant to subsection 13(i) and this section 14.

- (b) The Committee may initiate arbitration pursuant to subsection 13(i) by taking the following actions:
- (1) an affirmative vote to initiate arbitration by at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  - (2) either of the following:
    - (a) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to subsection 13(i) within the applicable time period established in subsection 13(h); or
    - (b) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subsection 14(b) shall set forth in detail the matter or matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (c) Bonneville shall, within 10 Working Days after receipt of the notice by the Committee referred to in subsection 14(b), appoint a second arbitrator and provide by written notice to each Capacity Owner that has appointed a representative to the Committee the name, street address and telephone number of the arbitrator appointed by Bonneville. The two arbitrators appointed by the Committee and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville.
- (1) If the arbitrators appointed by the Committee and by Bonneville, respectively, fail to appoint a third arbitrator

within 15 days after the date of the appointment of an arbitrator by Bonneville, then within 30 days after the date of the appointment of an arbitrator by Bonneville, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.

- (2) If Bonneville fails to appoint an arbitrator within 15 days after receipt of the notice by the Committee referred to in subsection 14(b), then within 30 days after the date of such notice, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
  - (3) If, pursuant to either paragraph 14(c)(1) or 14(c)(2), the Committee applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Committee shall give Bonneville written notice of such application within 5 days after the date of filing such application.
- (d) The three arbitrators appointed pursuant to subsections 14(b) and 14(c) shall select by a majority vote an alternative pursuant to subsection 14(g).
  - (e) Within 10 days after the appointment of a third arbitrator pursuant to subsection 14(c), the arbitrators shall establish a schedule for submission of written positions by Bonneville and Seattle, respectively. The arbitrators must establish a schedule for such submissions pursuant to this subsection 14(e) that will allow the arbitration to be concluded, and the decision of the arbitrators rendered pursuant to subsection 14(g), within 120 days following the date of the appointment of the third arbitrator. A copy of any submission by the Committee to the arbitrators pursuant to this section 14 shall be simultaneously served by the Committee on Bonneville, and a copy of any submission by Bonneville to the



arbitrators pursuant to this section 14 shall be simultaneously served by Bonneville on each Capacity Owner that has appointed a representative to the Committee. The Committee shall state, in a letter to the arbitrators, as its proposed alternative to each Bonneville proposal in dispute, the recommendation proposed by the Committee pursuant to subsection 13(g) and rejected in whole or in part by Bonneville pursuant to subsection 13(g). Bonneville shall state its position and proposed resolution of the dispute in a letter to the arbitrators. If Bonneville made a proposal in response to such recommendation of the Committee pursuant to subsection 13(g), then such position and proposed resolution shall set forth such proposal, or if Bonneville made no such proposal, then such position and proposed resolution shall set forth the relevant portion of the Operating Plan. If, however, the arbitration concerns an exception pursuant to paragraph 16(f)(3), then the positions and proposed resolutions of Bonneville and the Committee shall be as established pursuant to such subsection. The Committee may then submit a response to Bonneville's letter, and Bonneville may thereafter submit a reply to the Committee's response. Bonneville and the Committee shall have an equal number of days to prepare and serve their replies.

- (f) No submission by either the Committee or Bonneville to the arbitrators pursuant to subsection 14(e) shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Committee or Bonneville, and for good cause shown, the arbitrators may permit any submission by such Party to exceed 50 pages.
- (g) The arbitrators shall select, as between the Committee's recommendation pursuant to subsection 13(e), on the one hand, and the portion of Bonneville's proposed Operating Plan to which the Committee's recommendation pertains or Bonneville's proposal pursuant to subsection 13(g) not accepted by the Committee, on the other, the alternative which
  - (1) is consistent with the provisions of this Agreement and

- (2) (A) in conformity with the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto, would better achieve the desired result consistent with safety, reliability, and cost-benefit or (B) if there are no such generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area, would, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, be reasonably expected to better achieve the desired result consistent with safety, reliability, and cost-benefit.
- (h) In applying the standards set forth in subsection 14(g), the arbitrators shall take into consideration, among other things (a) that Bonneville and Seattle each have responsibilities for service to customers within and without the Pacific Northwest region in accordance with applicable law, (b) that Bonneville and others jointly own the PNW AC Intertie and Bonneville owes contractual obligations to those parties regarding the PNW AC Intertie, (c) that Bonneville must operate, as a practical matter, the PNW AC Intertie in coordination with the operation of the interconnected intertie facilities in California, and (d) that the PNW AC Intertie is a major import-export facility important to the service of loads in and out of the region.
- (i) In any arbitration pursuant to this section 14, the arbitrators shall choose, pursuant to subsection 14(g), only between the alternatives proposed by Bonneville and the Committee and shall have no authority to resolve such arbitration other than by selecting an alternative proposed by either Bonneville or the Committee.
- (j) Upon selection by the arbitrators of an alternative pursuant to subsection 14(g), then Bonneville shall amend the Operating Plan to cause it to conform to the decision of the arbitrators.
- (k) If the arbitrators have not made a selection of an alternative pursuant to subsection 14(i) before the date on which the Operating Plan

becomes effective pursuant to subsection 13(j), then Seattle shall make payments of annual charges pursuant to such Operating Plan. If the arbitrators subsequently select the Committee's alternative, then Bonneville shall, subsequent to amending such Operating Plan pursuant to subsection 14(j), refund to or bill Seattle its pro rata share of the amount of the incremental difference between the costs set forth in such Operating Plan as amended pursuant to subsection 14(j) and 105 percent of the costs set forth in such Operating Plan, prior to its amendment pursuant to subsection 14(j), to the extent that such costs were incurred during the period from the first day of effectiveness of such Operating Plan pursuant to subsection 13(j) to the date of the arbitrators' decision, such refund to be made pursuant to subsection 9(f) and such payment to be made pursuant to subsection 9(b).

- (l) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 14 equal to  $1 / (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay its own expenses related to the arbitration proceeding including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
- (m) Any judgment rendered by a court of competent jurisdiction upon an award made by the arbitrators pursuant to this section 14 may be entered in any court having jurisdiction thereof.

## 15. NONBINDING ARBITRATION

- (a) The Initiating Party (as defined in paragraph 15(e)(1)) may, subject to the immediately succeeding sentence, elect by written notice to Responding Party (as defined in paragraph 15(e)(1)) to refer to nonbinding arbitration pursuant to the other provisions of this section 15 the following: (i) if the Initiating Party is the Committee, any recommendation by the Committee, or any portion thereof, concerning

any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 and (ii) any other issue, dispute, or controversy regarding the Parties' respective rights and obligations pursuant to this Agreement. The Initiating Party's right pursuant to this subsection 15(a) to arbitrate any recommendation or any issue, dispute or controversy shall be subject to the following limitations:

- (1) the Initiating Party may not arbitrate pursuant to this subsection 15(a): (A) any recommendation with respect to an Operating Plan or any amendment to an Operating Plan or (B) any issue, dispute, or controversy, which recommendation, issue, dispute or controversy may be arbitrated pursuant to subsection 13(i) or 16(f);
- (2) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation not permitted to be arbitrated pursuant to paragraphs 13(i)(1), 13(i)(3), 13(i)(4), and 13(i)(8);
- (3) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning a loss factor or revision to a loss factor set forth in Exhibit E, Part A or Part B pursuant to this Agreement;
- (4) the Committee may not (but the Seattle or Bonneville may) arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning any right or obligation of Seattle pursuant to this Agreement that is not a right or obligation, as the case may be, of each other Capacity Owner under its respective Capacity Ownership Agreement; or

- (5) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operating Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs and forecast End of Term Costs set forth in such Operating Plan, the Committee may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 only to the extent that such actual cost exceeds 105 percent of the forecast for such activity or such project; provided, however, that, without limiting any of Seattle's rights and benefits pursuant to section 16(f), no Initiating Party may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 if such actual cost is less than 105 percent of the forecast for such activity or such project; and
- (6) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any issue, dispute, or controversy (A) concerning matters of ratemaking (for purposes of this subsection 15(a), the term "ratemaking" shall mean the determination of matters appropriately determined pursuant to section 7(i) of the Regional Act, including (i) Bonneville's revenue requirements (including without limitation

Bonneville's depreciation and repayment standards and planned net revenues for risk, but excluding program level issues determined in the Federal budget process), (ii) Bonneville's cost of service analysis (including functionalization, segmentation, and allocation of costs contained in such analysis, but excluding any allocation of costs contemplated in Exhibit I), (iii) Bonneville's rate design, and (iv) any related environmental analysis of proposed rates; (B) concerning a final action of Bonneville, which final action is not itself performance of any obligation of Bonneville or Bonneville's Administrator under this Agreement; or (C) concerning, or requiring the decision of, a matter not arising under this Agreement or the other Capacity Ownership Agreements.

- (b) Except as otherwise provided in paragraph 15(a)(4), all arbitrations pursuant to this section 15 shall be between Bonneville and the Committee.
- (c) A copy of any submission (including, without limitation, any statement of position or any brief) by the Initiating Party or the Responding Party to the arbitrators pursuant to this section 15 shall be simultaneously served by such party on the Responding Party or Initiating Party, respectively. No submission by either the Initiating Party or the Responding Party to the arbitrators shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Initiating Party or the Responding Party, and for good cause shown, the arbitrators may permit any submission by such party to exceed 50 pages.
- (d) With respect to any arbitration pursuant to this section 15 of any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:

- (1) Only the Committee may initiate arbitration with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7. The Committee may initiate nonbinding arbitration pursuant to this section 15 by taking the following actions:
  - (A) an affirmative vote to initiate arbitration pursuant to this section 15 by the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  - (B) either of the following:
    - (i) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to this section 15 within the applicable time period set forth in subsection 13(h); or
    - (ii) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subparagraph 15(d)(1)(B) shall (x) indicate that such vote has been taken and (y) set forth in detail the matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (2) The respective rights and obligations of the Committee and of Bonneville with respect to arbitration pursuant to this subsection 15(d), unless otherwise provided in this subsection 15(d), shall be as set forth in subsections 14(d) through 14(l).
- (e) With respect to any arbitration pursuant to this section 15 of any issue, dispute, or controversy other than with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) The party (which term, for purposes of this subsection 15(e), shall refer to Bonneville, on the one hand, and to the Committee or Seattle, on the other) initiating arbitration (Initiating Party) shall initiate arbitration pursuant to this section 15 by serving written notice on the other party (Responding Party) of its initiation of arbitration. If the Committee is the party initiating arbitration, the Committee, in addition to serving such notice, shall initiate such arbitration by an affirmative vote to do so of at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one. The Committee shall indicate that such vote has been taken in such notice to Bonneville. Any such notice by an Initiating Party shall set forth in detail the following: (A) the issue, dispute, or controversy to be arbitrated and the Initiating Party's position regarding such issue, dispute, or controversy; (B) the relief sought by the Initiating Party; and (C) the name, street address, and telephone number of the arbitrator appointed by the Initiating Party. The Responding Party shall, within 15 days after receipt of the notice by the Initiating Party referred to in this subsection 15(e), appoint a second arbitrator and provide written notice to the Initiating Party and to the arbitrator appointed by the Initiating Party of the



name, street address and telephone number of the arbitrator appointed by the Responding Party. The arbitrators appointed by the Initiating Party and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party.

- (A) If the arbitrators appointed by the Initiating Party and by the Responding Party, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party, then within 30 days after the date of the appointment of an arbitrator by the Responding Party the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
  - (B) If the Responding Party fails to appoint an arbitrator within 15 days after receipt of the notice by the Initiating Party referred to in paragraph 15(e)(1), then within 30 days after the date of such notice the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
  - (C) If, pursuant to either subparagraph 15(e)(1)(A) or 15(e)(1)(B), the Initiating Party applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Initiating Party shall give the Responding Party written notice of such application within one day after the date of filing such application.
- (2) The three arbitrators appointed pursuant to paragraph 15(e)(1) shall decide any issue, dispute, or controversy by majority vote.

- (3) Within 20 days after the appointment of a third arbitrator pursuant to paragraph 15(e)(1) with respect to any arbitration pursuant to this subsection 15(e), the arbitrators shall establish a schedule for the completion of such arbitration. The first day pursuant to such schedule shall be hereafter referred to in this subsection 15(e) as the "Arbitration Commencement Date."
- (4) No later than 15 days after the Arbitration Commencement Date, the Initiating Party may make a single request in writing to the Responding Party for documentation, data, and information relevant to or reasonably necessary to support the Initiating Party's position communicated to the Responding Party pursuant to paragraph 15(e)(1). Such single request may contain multiple parts. The Initiating Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information pursuant to this paragraph.
- (5) The Responding Party shall have 20 days from the date it receives the request from the Initiating Party pursuant to paragraph 15(e)(4) to provide the documentation, data, and information requested; provided, however, that the Responding Party shall be under no obligation pursuant to this paragraph 15(e)(5) (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Initiating Party or (D) if Bonneville is the Responding Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as

amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (6) No later than 15 days after the Arbitration Commencement Date, the Responding Party may make a single request in writing to the Initiating Party for documentation, data and information relevant to Initiating Party's position communicated to the Responding Party pursuant to subsection 15(e)(4). Such single request may contain multiple parts. The Responding Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data and information pursuant to this paragraph.
- (7) The Initiating Party shall have 20 days from the date it receives the request from the Responding Party pursuant to paragraph 15(e)(6) to provide the documentation, data and information requested; provided, however, that the Initiating Party shall be under no obligation pursuant to this paragraph 15(e)(7) (A) to create additional documentation, data, or information, (B) to provide documentation, data or information that is not readily available to it, (C) to provide to the Responding Party documentation, data, or information that the Initiating Party has previously provided to the Responding Party or (D) if Bonneville is the Initiating Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.
- (8) For purposes of this subsection 15(e), each of the Initiating Party and the Responding Party shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes

regarding, and clarify requests by it for, documentation, data, and information and responses to such requests.

- (9) Within 65 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may state in reasonable detail its position regarding any issue, dispute or controversy to be arbitrated pursuant to this subsection 15(e) in a letter to the arbitrators and to the other party to the arbitration of such issue, dispute, or controversy. Within 85 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may submit a letter to the arbitrators and to the other party responding to the letter that the other submitted to the arbitrators pursuant to the immediately preceding sentence.
- (10) The arbitrators shall resolve any issue, dispute, or controversy pursuant to this subsection 15(e) by deciding (taking into consideration, among other things, any letter submitted by the Initiating Party or the Responding Party with respect to such issue, dispute, or controversy) whether the position of the Initiating Party or the position of the Responding Party regarding the action taken or proposed to be taken by the Responding Party conforms more closely with the standard for such action set forth in this Agreement. The arbitrators shall have no authority to fashion a resolution of such arbitration other than pursuant to this paragraph 15(e)(10).
- (f) Any selection by the arbitrators of an alternative pursuant to subsection 15(d) and any decision by the arbitrators pursuant to subsection 15(e) shall be reported by the Initiating Party to the Bonneville Administrator (Administrator) for review within 30 days after such selection or decision is made. The Administrator shall either accept or reject in writing such selection or decision. If the Administrator fails to either accept or reject such selection or decision, as the case may be, within 90 days after such selection or decision is

made, such selection or decision, as the case may be, shall be deemed to be accepted by the Administrator.

- (g) If the Administrator accepts any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e), such selection or decision shall become binding upon Seattle and Bonneville at the time of its acceptance.
  
- (h) The Administrator may reject any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e) only for one or more of the following reasons:
  - (1) the arbitrators did not follow the arbitration procedures set forth in this section 15;
  - (2) the arbitrators decided a matter that is not a matter arising under this Agreement as set forth in paragraph 15(a)(6);
  - (3) the arbitrators did not completely apply the appropriate standard for arbitration pursuant to this section 15;
  - (4) the arbitrators granted relief in contravention of this Agreement;
  - (5) the arbitrators' decision is not supported by substantial, competent evidence; or
  - (6) implementation of the arbitrators' decision would cause Bonneville to violate a statutory obligation of Bonneville's or would cause Bonneville to breach a contractual obligation not in contravention of this Agreement.
  
- (i) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 15

equal to  $1 + (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay for its own expenses related to the arbitration proceeding, including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.

- (j) If the Initiating Party elects to arbitrate any issue, dispute, or controversy pursuant to this section 15, the Initiating Party must initiate arbitration of such issue, dispute, or controversy within one year following the occurrence of the event giving rise to such issue, dispute, or controversy. Failure of the Initiating Party to initiate arbitration of any such issue, dispute, or controversy within such one-year period shall constitute a waiver of the Initiating Party's right to arbitrate such issue, dispute, or controversy pursuant to this section 15.

## 16. **AUDIT RIGHTS**

- (a) The Committee shall have the right to perform an audit of Bonneville's books, records, and documents used in or relating to the determination of the Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to the Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(2)(B).
- (b) The Committee shall have the right to perform an audit of Bonneville's books, records and documents used in or relating to the determination of any Revised Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to any Revised Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(3)(B).

- (c) The Committee shall have the right to audit Bonneville's books, records, and documents (i) used in or relating to the determination of any charge (including, without limitation, any MFU count made pursuant to section I.A of Exhibit I) billed to Seattle pursuant to paragraph 9(b)(2) and subsection 9(c), or (ii) used in or relating to any billing or refund with respect to any such charge. Such audit shall be performed within 36 months after the date of Bonneville's bill or refund voucher for such charge rendered by Bonneville to Seattle pursuant to paragraph 9(b)(2) or subsection 9(c), as the case may be.
- (d) Bonneville shall not be responsible to pay any of the expenses incurred by any of the Capacity Owners in performing any audit pursuant to this section 16. Bonneville shall not directly charge Seattle or any Capacity Owner other than Seattle for Bonneville's costs incurred by Bonneville with respect to any audit pursuant to this section 16 unless Bonneville develops a general practice of charging, through direct charges, each of its customers for such costs incurred by Bonneville in connection with audits undertaken pursuant to those customers' respective contracts with Bonneville.
- (e) After completing any audit specified above, the Committee shall promptly provide to Bonneville a written report of the results of such audit. If such audit report includes any exception taken as a result of such audit and Bonneville agrees with such exception, Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such audit exception,
- (1) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Seattle a revised bill or refund voucher pursuant to paragraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
  - (2) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and either

(A) render to Seattle a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (B) cause to be refunded to Seattle as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Seattle's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this subsection 16(e) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such audit report is received by Bonneville to (but excluding) the date on which such amount is refunded to Seattle.

- (f) If an audit report provided to Bonneville by Seattle pursuant to subsection 16(e) includes any exception taken as a result of such audit and Bonneville does not agree with such exception, then the following shall apply:
- (1) Bonneville may, within 30 days following its receipt of such audit report, propose to the Committee a resolution of any inconsistency noted in any exception taken as a result of such audit;
  - (2) If the Committee accepts such resolution proposed by Bonneville, then Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such resolution,
    - (A) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Seattle a revised bill or refund voucher pursuant to subparagraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted



Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and

- (B) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and shall either (i) render to Seattle a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (ii) cause to be refunded to Seattle as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Seattle's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this paragraph 16(f)(2) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such resolution is accepted by the Committee to (but excluding) the date on which such amount is refunded to Seattle; and

- (3) If the Committee does not accept such resolution, if any, proposed by Bonneville with respect to any such exception, or if Bonneville does not propose any such resolution, then the Committee
  - (A) shall have the right to arbitrate, pursuant to section 14, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to subsection 13(i); and
  - (B) shall have the right to arbitrate, pursuant to section 15, any cost with respect to which such exception is taken to

the extent that such cost is permitted to be arbitrated pursuant to section 15.

The Committee must refer to arbitration pursuant to subparagraph 16(f)(3)(A) or 16(f)(3)(B) any cost to which exception is taken as a result of any audit within eight months after the date the Committee commences such audit. Failure of the Committee to elect to so refer to arbitration any cost within such eight-month period shall be deemed to constitute waiver by the Committee of any right pursuant to this section 16 to arbitrate such cost.

- (g) Seattle shall have the right to participate in any audit pursuant to this section 16 only by acting through the Committee. If Seattle chooses not to participate in any audit undertaken by the Committee, then Seattle shall accept the findings of the Committee with respect to such audit and any resolution by the Committee and Bonneville of any inconsistency noted in any exception taken as a result of such audit.
- (h) Any audits undertaken by the Committee shall be upon reasonable notice to Bonneville and at reasonable times and shall commence no more frequently than once in any 24 consecutive months. The audit rights provided in this section shall not be construed to permit a general audit of Bonneville's books, records, and documents. Audits shall be in conformance with generally accepted auditing standards. Prior to and for the duration of any audit, Bonneville shall retain all pertinent books, records, and documents prepared in the normal course of business. After commencement of an audit pursuant to subsection 16(a), 16(b), or 16(c), the Committee may request and Bonneville shall promptly provide reasonably available supporting documentation for any cost or charge subject to audit. If the Committee fails to commence an audit pursuant to subsection 16(a), 16(b), or 16(c) within the time periods set forth in subsection 16(a), 16(b), or 16(c), such failure shall constitute waiver by Seattle of any right pursuant to this section 16 to arbitrate any charge or refund billed or refunded by Bonneville.

- (i) If Seattle is operating pursuant to paragraph 3(b)(1), Bonneville shall have the right, at its own expense, to review Seattle's books, records, and documents that directly pertain to the revenue reportable in Seattle's accounting system where revenues received for wheeling for other entities would be booked for the purpose of verifying compliance with paragraph 3(b)(1). Bonneville shall have the right to perform such audit no more frequently than once every 36 months.

**17. PROTECTED AREAS**

Seattle shall not use its Scheduling Share for transmission of power on the PNW AC Intertie from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by Bonneville unless Seattle is required by regulatory authority to purchase or provide transmission for the output of such project or unless Bonneville receives sufficient demonstration that a particular project would provide benefits to Bonneville's existing or planned fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program. The Parties agree that System Sales shall not be taken into consideration in any determination of whether Seattle has used its Scheduling Share for transmission of power on the PNW AC Intertie from the hydroelectric projects referred to in the immediately preceding sentence. For purposes of this section 17, "System Sale" means any sale of power or energy to Seattle or by a seller of power or energy, which power or energy is not resource-specific and is delivered to Seattle at a point that connects one or more resources or transmission systems.

**18. ESTABLISHMENT AND MAINTENANCE OF RATES AND RELIEF FROM REGULATORY ACTION**

- (a) Bonneville shall use good faith efforts to maintain in effect such of the following rates that has been approved by FERC on an interim or final basis, during the rate approval period established by FERC for such rate:

- (1) any rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date;
  - (2) the Initial Successor Rate;
  - (3) the Alternative Successor Rate; and
  - (4) the Bonneville Successor Rate.
- (b) If Bonneville's Administrator submits to FERC a rate that is different from that set forth in Exhibit B, Part A and Part B, on the Effective Date, as the first rate proposed by Bonneville (Initial Successor Rate) to replace the AC-93 rate set forth in Exhibit A or that is for a rate approval period which is less than the remainder of the Term following the expiration of the AC-93 rate, Seattle may, within 90 days after Bonneville submits the Initial Successor Rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:
- (1) Seattle may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
  - (2) Seattle may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Seattle to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:
    - (A) This Agreement shall terminate upon the date Bonneville receives Seattle's notification to terminate this Agreement pursuant to this subsection 18(b) except for those rights and obligations set forth in this paragraph 18(b)(2).

(B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Seattle has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Seattle's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) X A) + I = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Seattle to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(b).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

I = Interest on  $A - ((B/540) X A)$ , accruing from (and including) the date of Bonneville's receipt of Seattle's Initial Lump Sum Payment to (but excluding) the date on which Bonneville receives Seattle's notification to terminate this Agreement pursuant to this subsection 18(a), at the 5-year Treasury note rate in effect on the date on which

Bonneville receives Seattle's Initial Lump Sum Payment.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(b)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(b)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(b)(2)(B), Bonneville may accelerate payment to Seattle of the amount of the Refunded Lump Sum Payment.

If Seattle elects to proceed under this paragraph 18(b)(2), Bonneville shall not develop a rate or charge that would inequitably allocate to Seattle and Capacity Owners other than Seattle, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Seattle or any Capacity Owner other than Seattle.

- (c) If FERC approves the Initial Successor Rate, the Alternative Successor Rate (as defined in subsection 18(d)), or the Bonneville Successor Rate (as defined in subsection 18(d)) for a term less than the remainder of the Term following the expiration of the AC-93 rate, and

if Bonneville's Administrator thereafter submits to FERC a rate (Replacement Rate) that is different from the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis) or that is for a rate approval period which is less than the remainder of the Term following the expiration of the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis), Seattle may, within 90 days after Bonneville submits such rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:

- (1) Seattle may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
- (2) Seattle may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Seattle to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:
  - (A) This Agreement shall terminate upon the date Bonneville receives Seattle's notification to terminate this Agreement pursuant to this subsection 18(c) except for those rights and obligations set forth in this paragraph 18(c)(2).
  - (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Seattle has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Seattle's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal

monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + R = \text{Refunded Lump Sum Payment}$$

where:

**A =** The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Seattle to Bonneville pursuant to subsection 9(a).

**B =** The number of months between the Effective Date and the termination date of this Agreement.

**540 =** 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

**R =** 2.5 times the amount paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the immediately preceding fiscal year times the ratio of (a) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the first fiscal year during the proposed rate approval period pursuant to the rate submitted by Bonneville to FERC to replace the immediately preceding annual costs rate over (b) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the same fiscal year were the immediately preceding annual costs rate to remain in effect; provided, however, that the ratio of (a) over (b) shall in no event be less than one for purposes of this subsection.



- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(c)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(c)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(c)(2)(B), Bonneville may accelerate payment to Seattle of the amount of Refunded Lump Sum Payment.

If Seattle elects to proceed under this paragraph 18(c)(2), Bonneville shall not develop a special rate or charge that would inequitably allocate to Seattle and Capacity Owners other than Seattle, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Seattle or any Capacity Owner other than Seattle.

The terms of this subsection 18(c) shall be effective through December 31, 2040.

- (d) If (i) FERC remands or approves a rate which materially differs from the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, or (ii) FERC grants final approval

to a rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date, or to the Initial Successor Rate for a rate approval period of less than the remainder of the Term following the expiration of the AC-93 rate, or (iii) FERC remands or disapproves the Initial Successor Rate, then in any such event Bonneville, Seattle, and Capacity Owners other than Seattle shall use good faith efforts to develop an alternative successor rate (Alternative Successor Rate) which would place Seattle in substantially the same position with respect to Seattle's rights and obligations under this Agreement as if the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, had been approved by FERC for the remainder of the Term following the expiration of the AC-93 rate. Bonneville, Seattle, and Capacity Owners other than Seattle shall use good faith efforts to reach agreement on an Alternative Successor Rate within 6 months after the date of the FERC order regarding the Initial Successor Rate contemplated in this subsection 18(d) or within the time period established in such FERC order, whichever is earlier.

- (1) If Bonneville, Seattle, and Capacity Owners other than Seattle reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, then Bonneville shall, subject to section 7(i) of the Regional Act, submit such Alternative Successor Rate to FERC for approval and confirmation.
- (2) If Bonneville, Seattle, and Capacity Owners other than Seattle do not reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, Bonneville shall develop a rate, which, among other things, in Bonneville's judgment, protects the rights and obligations of Seattle and Capacity Owners other than Seattle and, subject to section 7(i) of the Regional Act, shall submit such rate (Bonneville Successor Rate) to FERC for approval and confirmation.

Nothing in this subsection 18(d) shall limit or otherwise affect any provisions of subsection 18(b) or 18(c).

- (e) If Bonneville, Seattle, and Capacity Owners other than Seattle are unable to agree upon an Alternative Successor Rate pursuant to subsection 18(d), or if FERC approves the Alternative Successor Rate for a period of less than 15 years or with terms and conditions that differ from the terms and conditions of the Alternative Successor Rate, or if FERC remands the Alternative Successor Rate, or if FERC approves the Bonneville Successor Rate, Seattle may elect, within 6 months of any of the foregoing events, to terminate this Agreement and execute a long-term contract with Bonneville for firm wheeling on the PNW-PSW Intertie for a term not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Seattle's Capacity Ownership Share, pursuant to subsection 18(f).
  
- (f) Should Seattle elect to proceed pursuant to paragraph 18(b)(1) or 18(c)(1) or subsection 18(e), the Parties shall take the following steps:
  - (1) Seattle shall provide Bonneville with written notification of its election to terminate this Agreement and with a written request for a long-term contract for firm wheeling on the PNW-PSW Intertie for a period not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Seattle's Capacity Ownership Share.
  
  - (2) As soon as practicable after receipt by Bonneville of the written notice sent pursuant to paragraph 18(f)(1), Bonneville shall offer to Seattle a long-term contract for firm wheeling on the PNW-PSW Intertie of an amount of power equal to the amount of power specified in Seattle's written request pursuant to paragraph 18(f)(1), such offered contract to contain other terms and conditions substantially similar to those then being offered

by Bonneville to its other firm wheeling customers for transactions on the PNW-PSW Intertie.

The termination date of this Agreement shall be the same date as the effective date of the long-term contract for firm wheeling referred to in this paragraph 18(f)(2), and such date shall in any event be no more than 6 months after Bonneville's receipt of Seattle's notification pursuant to paragraph 18(f)(1).

(3) The long-term contract for firm wheeling offered to Seattle pursuant to paragraph 18(f)(2) shall also contain provisions which:

(A) Require Bonneville to credit or pay (any such payment to be made pursuant to paragraph 9(f)(4)), in equal monthly amounts during the term of such long-term contract for firm wheeling, against the amount payable by Seattle to Bonneville pursuant to such long-term wheeling agreement an amount equal to the "Credited Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) = \text{Credited Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Seattle to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(e).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

- (B) Require Bonneville, subject to the immediately succeeding sentence, to credit or pay interest on the Credited Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest to be credited or paid pursuant to this provision shall be credited or paid by Bonneville on the amount of each monthly amount of the Credited Lump Sum Payment to be credited or paid by Bonneville pursuant to the provision set forth in subparagraph 18(f)(3)(A).
- (C) Permit Bonneville to accelerate payment to Seattle of the amount of Credited Lump Sum Payment which remains uncredited at any time during the term of such long-term contract for firm wheeling.
- (g) Seattle's right to terminate this Agreement pursuant to subsections 18(d) through 18(f) is a one-time only right that must be exercised after FERC action pursuant to subsection 18(d). If Seattle fails to terminate the Agreement pursuant to subsection 18(e) as prescribed therein as a result of FERC action, Seattle shall have no future rights to terminate the Agreement under this section 18 as a result of FERC action.
- (h) Bonneville shall use best efforts to establish and maintain in effect the AC-93 rate, set forth in Exhibit A, during the remainder of the Term, but only until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), that is confirmed and approved by FERC on an interim or final basis, becomes effective. If FERC does not confirm and approve on a final

basis the AC-93 rate for a rate approval period of sufficient duration so that the AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or such other rate, becomes effective, then upon expiration of the rate approval period of such AC-93 rate, Bonneville shall submit to FERC a rate based on the methodology used to determine the AC-93 rate (revised AC-93 rate) and shall use best efforts to obtain a rate approval period for the revised AC-93 rate of sufficient duration so that the revised AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), becomes effective. If, at any time during the Term, FERC does not confirm and approve on an interim or final basis the AC-93 rate or revised AC-93 rate for any reason other than the duration of the rate approval period, Bonneville and Seattle shall use best efforts to develop a rate that would replace the AC-93 rate or revised AC-93 rate, and Bonneville shall submit such rate to FERC, pursuant to section 7(i) of the Regional Act, for confirmation and approval if such rate is agreed to by Bonneville, Seattle and Capacity Owners other than Seattle. If Bonneville and Seattle do not succeed in developing such rate, Bonneville shall submit to FERC, pursuant to section 7(i) of the Regional Act, a rate which in Bonneville's judgment recovers Bonneville's costs. Bonneville shall bill Seattle, and Seattle shall pay Bonneville, in accordance with the AC-93 rate or, if FERC does not confirm and approve on an interim or final basis the AC-93 rate, the rate confirmed and approved by FERC on an interim or final basis. Bonneville shall revise Exhibit A so that it contains, at a given time, the AC-93 or other rate confirmed and approved by FERC on an interim or final basis.

**19. EXHIBITS**

- (a) Exhibits A through J attached to this Agreement are by this reference made a part of this Agreement. In the event of a conflict between any provision in Exhibits A through J and the provisions of sections 1 through 23 of this Agreement, the provisions of sections 1 through 23 of this Agreement shall prevail.

- (b) Bonneville shall revise Exhibit A pursuant to subsections 18(g) and 18(h) and this subsection 19(b). The rate schedules attached hereto as Exhibit A have been conditionally or finally confirmed by FERC. If the final rate schedules which are approved by FERC are an amendment or modification of the initial rate schedules, the applicable amended or modified rate schedules and associated GTRSPs shall be attached to and made part of this Agreement effective as of the date specified in FERC's approval. The rate schedules and GTRSPs included in Exhibit A shall be replaced by successor rate schedules and provisions in accordance with the provisions of section 7(i) of the Regional Act and FERC rules.
- (c) Upon interim or final approval by FERC of any rate submitted to FERC pursuant to subsections 18(a) through 18(g), Bonneville shall revise Exhibit B so that Exhibit B contains such rate approved by FERC as contemplated in this subsection 19(c). For purposes of this Agreement, such rate shall be effective as of the date of effectiveness specified in FERC's approval of such rate. Subject to the provisions of subsections 18(a) through 18(g), the rate schedule set forth in Exhibit B, Part A and Part B, on the Effective Date, shall be replaced by successor rate schedules and provisions pursuant to section 7(i) of the Northwest Power Act and applicable FERC rules.
- (d) Bonneville shall revise or modify Exhibit C from time to time to reflect changes hereafter agreed to in writing by the Parties in Seattle's Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share.
- (e) Bonneville shall revise Exhibit D pursuant to subsection 9(a). Revision or modification of Exhibit D shall not require an executed amendment or revision to this Agreement.
- (f) Not more frequently than annually, Bonneville shall review and, as appropriate, revise Exhibit E, Part A, in accordance with Bonneville's standard methodology and formula for calculation of average losses

incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie. Such methodology and formula are intended to forecast average annual actual losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie Operational Transfer Capability. Any changes to the loss methodology or formula, other than numerical values, shall be made only after consultation with the Committee. During such consultation, Bonneville shall provide to the Committee material pertinent to such changes to the loss methodology or formula. Upon conclusion of any review of the loss factor in Exhibit E, Part A, Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan pursuant to section 13. If the Committee pursues arbitration pursuant to subsection 10(b) and section 14, Bonneville shall revise Exhibit E, Part A, to reflect the selection of the arbitrators pursuant to subsection 14(j).

- (g) Bonneville shall revise the loss factor in Exhibit E, Part B, as necessary to equal the same factor for average losses as Bonneville generally applies to transmission over Bonneville's share of the PNW-PSW Intertie. Revision of Exhibit E, Part B, shall not require an executed amendment or revision to this Agreement.
- (h) Bonneville shall revise Exhibit F as appropriate to reflect the facilities in Bonneville's PNW AC Intertie. Revision or modification of Exhibit F shall not require an executed amendment or revision to this Agreement.
- (i) Bonneville shall revise Exhibit G as appropriate to reflect the complete list of all of the Capacity Owners and their respective Capacity Ownership Shares and Capacity Ownership Percentages from time to time pursuant to this Agreement.
- (j) Bonneville shall revise Exhibit H as appropriate to reflect all provisions required by statute or Executive Order. Revision or modification of Exhibit H shall not require an executed amendment or revision to this Agreement.



- (k) Bonneville shall revise Exhibit I to reflect changes as agreed to in writing by Seattle and Capacity Owners other than Seattle.
- (l) Bonneville shall revise Exhibit J as mutually agreed to in writing by the Parties.

**20. RULES OF LAW**

- (a) Bonneville and Seattle agree that each fully participated in the drafting of each provision of this Agreement. The rule of law interpreting ambiguities against the drafting Party shall not be applicable to or utilized in resolving any dispute over the meaning or intent of this Agreement or any of its provisions.
- (b) This Agreement shall not be construed to establish a partnership, association, agency relationship, joint venture, or trust. Neither Party shall be under the control of or shall be or represent itself as, the agent of, or have a right or power to bind, the other Party without the other's express written consent, except as provided in this Agreement.
- (c) All applicable law is incorporated in and made part of this Agreement.

**21. NOTICES**

- (a) Unless the Agreement requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be served, given, or made if delivered in person or sent by acknowledged delivery, or sent by registered or certified mail, postage prepaid, to the persons addressed as set forth below:

To Bonneville:

Group Vice President for Marketing, Conservation and Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232

To Puget:

Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515

To Seattle:

Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101

To PNGC:

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232

To Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201

To Tacoma:  
Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411

- (b) Either Party may, by written notice to the other Party pursuant to subsection 21(a), change the address set forth in subsection 21(a) for the notifying Party.
- (c) All notices pursuant to this Agreement shall be effective on the date of receipt.

**22. WAIVER**

Any waiver at any time by a Party of its rights with respect to any matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent or other matter. Except as otherwise provided herein or as agreed in writing by the Parties, no provision in this Agreement may be waived except as documented or confirmed in writing.

**23. MISCELLANEOUS**

(a) **Effect of Section Headings**

Section headings and subheadings appearing in this Agreement are inserted for convenience only and shall not be construed as interpretations of provisions of this Agreement.

(b) **Amendments**

Except as may be expressly otherwise provided in this Agreement, this Agreement may be amended only with the express written consent of both of the Parties, and no provision of this Agreement shall be varied or contradicted by any oral agreement, course of

dealing or performance or any other matter not hereafter set forth in a written agreement signed by both of the Parties.

(c) **Entire Agreement**

This Agreement constitutes, on and as of the date hereof, the entire agreement of the Parties with respect to the subject matter of this Agreement, and all prior understandings or agreements, whether written or oral, between the Parties with respect to the subject matter of this Agreement are hereby superseded in their entirety.

(d) **No Third Party Beneficiaries**

There are no third party beneficiaries of this Agreement. This Agreement shall not be construed to create rights in, or to grant remedies to, any third party as a beneficiary of this Agreement or of any duty, obligation, or undertaking established herein.

(e) **Regulatory Approvals**

Each Party shall use its best efforts to obtain and maintain in effect regulatory approvals that are necessary to permit such Party to perform its obligations under this Agreement in accordance with its terms and conditions. Neither Party shall oppose in any way or seek to alter or amend the terms and conditions of this Agreement by application to or participation in any application of any regulatory authority or court having jurisdiction. Seattle shall not oppose in any way or seek to alter or amend the terms or conditions of the annual costs rate set forth in Exhibit B, the CO-94 rate, the AC-93 rate, or any rate described in section 18 that is agreed to by the Parties subsequent to each entering into this Agreement, in any proceeding pursuant to section 7 of the Pacific Northwest Electric Power Planning and Conservation Act before FERC or in any court of competent jurisdiction.

(f) **Other Capacity Ownership Agreements**

If Bonneville offers to enter into (i) a Capacity Ownership Agreement with any other Capacity Owner or (ii) any written amendment of any Capacity Ownership Agreement (other than this Agreement), then Bonneville shall offer to Seattle an amendment of this Agreement that contains the terms and conditions of such Capacity Ownership Agreement with such other Capacity Owner or of such written amendment, as the case may be. Bonneville shall advise, and use reasonable efforts to consult with, Seattle during the development or consideration of any offer to any Capacity Owner other than Seattle to enter into a Capacity Ownership Agreement or any amendment of such agreement.

(g) **Singular and Plural Forms**

For purposes of interpreting and construing this Agreement, the singular form of a word shall include its plural and the plural form of a word shall include its singular, unless otherwise expressly provided by this Agreement.

(h) **Performance Pending Dispute**

Except as otherwise expressly provided in this Agreement, pending resolution of any dispute, issue, or controversy arising under this Agreement, the Parties shall each continue performance of their respective obligations pursuant to this Agreement.

(i) **Time Periods**

For purposes of calculating any time period prescribed by this Agreement, if the last day of the time period falls on a day that is not a Working Day, then the last day of the time period shall be the first Working Day following such day as would otherwise be the last day of the time period.

(j) **Double Counting**

In developing rates or charges under section 7 of the Pacific Northwest Electric Power Planning and Conservation Act for any rate period, Bonneville shall not set rates or charges that recover, more than once, the costs associated with capital projects that are paid or forecast to be paid under the CO-94 rate and the AC-93 rate and annual costs rate set forth in Exhibit B, or the remaining Bonneville's PNW AC Intertie costs forecast to be paid under the AC-93 rate and annual costs rate set forth in Exhibit B. Bonneville's forecast of revenues chargeable under the CO-94 rate, AC-93 rate, and annual costs rate set forth in Exhibit B shall be based on the best available information, including information provided pursuant to section 13 of this Agreement.

In the event Bonneville proposes any wheeling rate for transmission service on Bonneville's main grid that includes costs of the PNW AC Intertie, such proposed rate shall include a credit or other mechanism that ensures that Seattle is not charged any of the PNW AC Intertie costs for deliveries of power that utilize up to the Seattle's Capacity Ownership Share, as that term is defined in this Agreement.

(k) **Committee Action**

Each of the Parties agrees that to the extent it is provided in sections 13, 14, and 16 that the Committee shall take any action or shall make any decision, such action or decision shall be taken or made, as the case may be, by the Committee, and not by Seattle acting individually.

(l) **Fiscal Year**

For purposes of this Agreement, the term "fiscal year" shall mean Bonneville's fiscal year.

(m) **Rights and Remedies Cumulative**

All rights and remedies of either Party under this Agreement and at law and in equity shall be cumulative and not mutually exclusive and the exercise of one right or remedy shall not be deemed a waiver of any other right or remedy. Nothing contained in any provision of this Agreement shall be construed to limit or exclude any right or remedy of either Party (arising on account of the breach or default by the other Party or otherwise) now or hereafter existing under any other provision of this Agreement, at law or in equity.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

/s/ WALTER E. POLLOCK  
Group Vice President for Marketing,  
Conservation and Production

By Walter E. Pollock  
*Group Vice President for Marketing,  
Conservation and Production*

Name Walter E. Pollock  
(Print/Type)

September 27, 1994

Date September 27, 1994

The City of Seattle

By Roberta Palm Bradley  
Name Roberta Palm Bradley  
(Print/Type)

/s/ ROBERTA PALM BRADLEY

Title Superintendent

Superintendent

Date September 23, 1994

September 23, 1994

Effective Date September 27, 1994



Exhibit A, Page 1 of 1  
Contract No. DE-MS79-94BP94522  
The City of Seattle  
Effective on the Effective Date

**CO-94, AC-93, IS-93 Rate Schedules and General Transmission  
Rate Schedule Provisions**

Schedule CO-94  
**CAPACITY OWNERSHIP RATE SCHEDULE**

**Section I. Availability**

This schedule applies to all agreements which provide life-of-facilities capacity rights to non-Federal participants (Capacity Owners) in 725 MW of Bonneville's PNW AC Intertie and any upgrades thereto. Service under this schedule is subject to Bonneville's General Transmission Rate Schedule Provisions.

**Section II. Rate**

The charge for capital and related costs for non-Federal capacity ownership in Bonneville's PNW AC Intertie shall be determined by the methodologies set out in Section III below.

**Section III. Determination of Rate**

**A. Capacity Ownership Price**

The charge for capacity ownership in Bonneville's PNW AC Intertie shall be the Capacity Ownership Share of the actual capital and related costs of facilities as determined by the formula shown below. The Capacity Ownership Share shall be determined pursuant to the Capacity Ownership agreement.

$$\frac{(A - B) + C + D}{E} = \text{Capacity Ownership Price in } \$/\text{kW}$$

Capacity Ownership Price in \$/kW x number of kW contracted for by Capacity Owner = Capacity Owner's payment to Bonneville

Where:

**A =** Bonneville's cost of new facilities for the Third AC Intertie, which increased the rated transfer capability of the PNW AC Intertie by approximately 1600 MW, is the construction costs (including direct, indirect and overhead costs) of the facilities associated with the Third AC Intertie System Reinforcements and the Alvey-Meridian

Transmission Line ( also known as Eugene-Medford 500-kV Transmission Line), referred to jointly as the Third AC Intertie Project.

- B = Bonneville's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project, which includes a portion of the construction costs (including direct, indirect and overhead costs) associated with the Third AC Intertie System Reinforcement.
- A-B = The cost of new facilities for the second 800 MW increment of the 1600 MW Third AC Intertie Project (presented in Exhibit C of the Capacity Ownership agreement).
- C = Allowance for Funds Used During Construction (AFUDC) constitutes interest on the funds used for the Third AC Intertie Project while it was under construction. AFUDC is calculated and capitalized consistent with FERC requirements as described in FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions, 3.A(17). The AFUDC applies to that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.
- D = Book value of existing Bonneville support facilities that are dedicated to the PNW AC Intertie equal to \$19,100,000.
- E = 725,000 kW, which equals Bonneville's share of the second 800 MW of the Third AC Intertie.

**B. PNW AC Intertie Upgrade Price**

The charge for upgrades to Bonneville's PNW AC Intertie facilities that occur after December 1993, and which result in an increase of rated transfer capability, shall be the Capacity Ownership Share of the capital and related costs of the upgrade. The Capacity Ownership Share of any upgrades shall be determined pursuant to the Capacity Ownership agreement. The capital costs shall consist of the construction costs (including direct, indirect and overhead costs) and AFUDC (as described in Section III.A. above) of the facilities associated with such upgrades.

#### **Section IV. Adjustments and Special Provisions**

##### **A. Initial Lump Sum Payment**

Capacity Owners shall make an initial, lump sum payment of an estimate of the Capacity Ownership Price equal to \$215/kW pursuant to the Capacity Ownership agreement.

##### **B. Adjustment to Reflect Actual Construction Costs**

Approximately December 1995 or as soon as practicable thereafter, the Capacity Owner's initial lump sum payment shall be adjusted to reflect the difference between the actual and the estimated Capacity Ownership Price. The actual Capacity Ownership Price shall be determined pursuant to Section III.A. above. There will be no adjustment for the book value of the support facilities dedicated to the PNW AC Intertie. Capacity Owners will either receive a refund, with interest, from Bonneville or make an additional payment, with interest, to Bonneville. Bonneville shall compute interest using the weighted average interest rate on Bonneville's outstanding bonds.

##### **C. PNW AC Intertie Upgrade Payments**

Capacity Owners shall pay a share of the upgrades to Bonneville's PNW AC Intertie in the manner and time to be determined when participation in such upgrades are agreed to pursuant to the Capacity Ownership agreement.

Schedule AC-93  
Southern Intertie Annual Cost

SECTION I. AVAILABILITY

This schedule is applicable to all parties (New Owners) that execute PNW AC Intertie Capacity Ownership Agreements (Agreements) and will be effective on the date described in the Agreement. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

The rate charges reflect the terms of the Memorandum of Understanding (MOU), signed in the Fall of 1991, between BPA and potential New Owners. The MOU provides for the payment by New Owners of their prorated share of: (1) BPA's annual operations, maintenance, and general plant expense (including applicable overheads) property chargeable to the AC Intertie facilities; and (2) BPA's share of capitalized replacements on the AC Intertie. The monthly charge shall be the sum of the charges specified in sections II.A and II.B.

A. Operations, Maintenance, and General Plant

The monthly charge shall equal \$325 per megawatt of billing demand.

B. Replacements

The monthly charge shall equal \$0 per megawatt of billing demand.

SECTION III. ADJUSTMENT TO REPLACEMENTS RATE

A. Determination of Billing Adjustment

New Owners will receive a billing adjustment if BPA incurs AC Intertie replacement cost during the rate period. The Replacements Rate Adjustment equals:

$$\frac{\text{AC Intertie work orders (\$XXX)} \times \%}{725 \text{ MW} \times \# \text{ months}}$$

where:

"# months" equals: (1) the number of months that this rate schedule is in effect during the fiscal year for the Initial Replacements Rate Adjustment; or (2) the number of months in the rate period for the Final Replacements Rate Adjustment; and

"%" equals the New Owners' percentage share of BPA's total AC Intertie Rated Transfer Capability as specified in the Agreements.

B. Initial Replacements Rate Adjustment

New Owners will receive a billing adjustment for each fiscal year that BPA incurs AC Intertie replacement cost. At the end of each fiscal year, the cost associated with AC Intertie capital replacement work orders that have closed during the fiscal year will be determined. The unit rate that would result using these closed work orders is the basis of the Initial Replacements Rate Adjustment.

1. Notice Provisions

Following each fiscal year, BPA shall notify all New Owners by December 15 of the proposed Replacements Rate Adjustment. BPA will provide the calculation of the adjustment and a short description of the work performed and the associated cost used as the basis for the billing adjustment. In addition to written notification, BPA may, but is not obligated to, hold a public meeting to clarify its determinations.

Schedule AC-93  
(Continued)

Written comments on the Initial Replacements Rate Adjustment will be accepted through the end of January. Consideration of comments submitted by the New Owners may result in the billing adjustment differing from the initially proposed adjustment. BPA shall notify all New Owners of the Initial Replacements Rate Adjustment by the last day of February.

2. Adjustment of Monthly Bills

An adjustment will be made on the New Owner's monthly bill prepared during March. The Initial Replacements Rate adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal year (i.e., the New Owner's share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal year). The Initial Replacements Rate Adjustment will appear as a charge to the New Owner on the monthly bill prepared during March.

C. Final Replacements Rate Adjustment

The actual costs associated with the AC Intertie capital replacement work orders that occur during the rate period may change after BPA performs its final analysis of the work orders. BPA shall compare the unit rate for the rate period using the results of the final work order analysis to the weighted average of the unit rates from the Initial Replacements Rate Adjustments.

1. Notice Provisions

BPA shall notify all New Owners in May 1998 of the results of the calculations, an explanation of work

order change(s), and any resulting billing adjustment. Written comments from New Owners will be accepted through the end of June. BPA shall notify all New Owners of the Final Replacements Rate Adjustment by July 31. Consideration of comments submitted by the New Owners may result in the Final Replacements Rate Adjustment differing from the initially proposed adjustment.

2. Adjustment of Monthly Bills

If the absolute value of the Final Replacements Rate Adjustment is greater than or equal to \$1 per megawatt per month, an adjustment will be made on the New Owner's monthly bill prepared during August. For each New Owner, the Final Replacements Rate Adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal years (i.e., the New Owner's share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal years). The Final Replacements Rate Adjustment will appear as a charge or credit to the New Owner on the monthly bill prepared during August. Interest, as determined by BPA's Office of Financial Management, will be included in any adjustment.

SECTION IV. BILLING FACTOR

The billing demand shall be the New Owner's capacity ownership share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability as specified in the Agreement.

Schedule IS-93  
Southern Intertie Transmission

**SECTION I. AVAILABILITY**

This schedule supersedes IS-91 and is available for all transmission on the Southern Intertie. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

**SECTION II. RATE**

**A. Nonfirm Transmission Rate**

The charge for nonfirm transmission of non-BPA power shall be 3.11 mills per kilowatthour of billing energy. This charge applies for both north-to-south and south-to-north transactions.

**B. Firm Transmission Rate**

The charge for firm transmission service shall be \$0.706 per kilowatt per month of billing demand and 1.69 mills per kilowatthour of billing energy. Firm transmission will only be made available to customers under this rate schedule who have executed a contract with BPA specifying use of the Firm Transmission rate for either north-to-south or south-to-north transactions.

**SECTION III. BILLING FACTORS**

- A. For services under Section II.A, the billing energy shall be the monthly sum of the scheduled kilowatthours, plus the monthly sum of kilowatthours allocated but not scheduled. The amount of allocated but not scheduled energy that is subject to billing may be reduced pro rata by BPA due to forced Intertie outages and other uncontrollable forces that may reduce Intertie capacity. The amount of allocated but not scheduled energy that is subject to billing

also may be reduced upon mutual agreement between BPA and the customer.

- B. For services under Section II.B, the billing demand shall be the Transmission Demand as defined in the Agreement. The billing energy shall be the monthly sum of scheduled kilowatthours, unless otherwise specified in the Agreement.

## General Transmission Rate Schedule Provisions

### SECTION I. ADOPTION OF REVISED TRANSMISSION RATE SCHEDULES AND GENERAL TRANSMISSION RATE SCHEDULE PROVISIONS (GTRSPs)

#### A. Approval of Rates

These rate schedules and GTRSPs shall become effective upon interim approval or upon final confirmation and approval by FERC. BPA will request FERC approval effective October 1, 1993.

#### B. General Provisions

These 1993 Transmission Rate Schedules and associated GTRSPs are virtually identical to and supersede BPA's 1991 Transmission Rate Schedules and GTRSPs (which became effective October 1, 1991) but do not supersede prior rate schedules required by agreement to remain in force.

Transmission service provided shall be subject to the following Acts, as amended: the Bonneville Project Act, the Regional Preference Act (P.L. 88-552), the Federal Columbia River Transmission System Act, and the Pacific Northwest Electric Power Planning and Conservation Act, and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992).

The meaning of terms used in the transmission rate schedules shall be as defined in agreements or provisions which are attached to the Agreement or as in any of the above Acts.

#### C. Interpretation

If a provision in the executed Agreement is in conflict with a provision contained herein, the former shall prevail.

### SECTION II. BILLING FACTOR DEFINITIONS AND BILLING ADJUSTMENTS

#### A. Billing Factors

##### 1. Scheduled Demand

The largest of hourly amounts wheeled which are scheduled by the customer during the time period specified in the rate schedules.

##### 2. Metered Demand

The Metered Demand in kilowatts shall be the largest of the 60-minute clock-hour integrated demands measured by meters installed at each POD during each time period specified in the applicable rate schedule. Such measurements shall be made as specified in the Agreement. BPA, in determining the Metered Demand, will exclude any abnormal readings due to or resulting from: (a) emergencies or breakdowns on, or maintenance of, the FCRTS; or (b) emergencies on the customer's facilities, provided that such facilities have been adequately maintained and prudently operated as determined by BPA. If more than one class of power is delivered to any POD, the portion of the metered quantities assigned to any class of power shall be as agreed to by the parties. The amount so assigned shall constitute the Metered Demand for such class of power.



3. Transmission Demand

The demand as defined in the Agreement.

4. Total Transmission Demand

The sum of the transmission demands as defined in the Agreement.

5. Ratchet Demand

The maximum demand established during the previous 11 billing months. Exception: If a Transmission Demand or Total Transmission Demand has been decreased pursuant to the terms of the Agreement during the previous 11 billing months, such decrease will be reflected in determining the Ratchet Demand.

B. Billing Adjustments

Average Power Factor

The adjustment for average power factor, when specified in a transmission rate schedule or in the Agreement, shall be made in accordance with the average power factor section of the General Wheeling Provisions.

To maintain acceptable operating conditions on the Federal system, BPA may restrict deliveries of power at any time that the average leading power factor or average lagging power factor for all classes of power delivered to such point or to such system is below 85 percent.

SECTION III. OTHER DEFINITIONS

Definitions of the terms below shall be applied to these provisions and the Transmission Rate Schedules, unless otherwise defined in the Agreement.

A. Agreement

An agreement between BPA and a customer to which these rate schedules and provisions may be applied.

B. Eastern Intertie

The segment of the FCRTS for which the transmission facilities consist of the Townsend-Garrison double-circuit 500 kV transmission line segment including related terminals at Garrison.

C. Electric Power

Electric peaking capacity (kW) and/or electric energy (kWh).

D. Federal Columbia River Transmission System

The transmission facilities of the Federal Columbia River Power System, which include all transmission facilities owned by the government and operated by BPA, and other facilities over which BPA has obtained transmission rights.

E. Firm Transmission Service

Transmission service which BPA provides for any non-BPA power except for transmission service which is scheduled as nonfirm. If the firm service is provided pursuant to the Agreement, the terms of the Agreement may further define the service.

F. Integrated Network

The segment of the FCRTS for which the transmission facilities provide the bulk of transmission of electric power within the Pacific Northwest, excluding facilities not segmented to the network as shown in the Wholesale Power Rate Development Study used in BPA's rate development.

**G. Main Grid**

As used in the FPT and IR rate schedules, that portion of the Integrated Network with facilities rated 230 kV and higher.

**H. Main Grid Distance**

As used in the FPT rate schedules, the distance in airline miles on the Main Grid between the POI and the POD, multiplied by 1.15.

**I. Main Grid Interconnection Terminal**

As used in the FPT rate schedules, Main Grid terminal facilities that interconnect the FCRTS with non-BPA facilities.

**J. Main Grid Miscellaneous Facilities**

As used in the FPT rate schedules, switching, transformation, and other facilities of the Main Grid not included in other components.

**K. Main Grid Terminal**

As used in the FPT rate schedules, the Main Grid terminal facilities located at the sending and/or receiving end of a line exclusive of the interconnection terminals.

**L. Nonfirm Transmission Service**

Interruptible transmission service which BPA may provide for non-BPA power.

**M. Northern Intertie**

The segment of the FCRTS for which the transmission facilities consist of two 500 kV lines between Ouster Substation and the United States-Canadian border, one 500 kV line between Ouster and Monroe Substations, and two 230 kV lines from Boundary Substation to the United States-Canadian border, and the associated substation facilities.

**N. Point of Integration (POI)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is made available to BPA for wheeling.

**O. Point of Delivery (POD)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is delivered to a customer by BPA.

**P. Secondary System**

As used in the FPT and IR rate schedules, that portion of the Integrated Network facilities with operating voltage of 115 kV or 69 kV.

**Q. Secondary System Distance**

As used in the FPT rate schedules, the number of circuit miles of Secondary System transmission lines between the secondary POI and the Main Grid or the secondary POD, or the Main Grid and the secondary POD.

**R. Secondary System Interconnection Terminal**

As used in the FPT rate schedules, the terminal facilities on the Secondary System that interconnect the FCRTS with non-BPA facilities.

**S. Secondary System Intermediate Terminal**

As used in the FPT rate schedules, the first and final terminal facilities in the Secondary System transmission path exclusive of the Secondary System Interconnection terminals.

**T. Secondary Transformation**

As used in the FPT rate schedules, transformation from Main Grid to Secondary System facilities.

#### U. Southern Intertie

The segment of the FCRTS for which the major transmission facilities consist of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; when completed, the Third AC facilities, which include Captain Jack Substation and the Alvey-Meridian 500 kV AC line; one 1,000 kV DC line between the Celilo Substation and the Oregon-Nevada border; and associated substation facilities.

#### V. Transmission Service

As used in the MT rate schedule, Transmission Service is as defined in the Western Systems Power Pool Agreement.

### SECTION IV. BILLING INFORMATION

#### A. Payment of Bills

Bills for transmission service shall be rendered monthly by BPA. Failure to receive a bill shall not release the customer from liability for payment. Bills for amounts due of \$50,000 or more must be paid by direct wire transfer; customers who expect that their average monthly bill will not exceed \$50,000 and who expect special difficulties in meeting this requirement may request, and BPA may approve, an exemption from this requirement. Bills for amounts due BPA under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by BPA. The procedures to be followed in making direct wire transfers will be provided by the Office of Financial Management and updated as necessary.

##### 1. Computation of Bills

The transmission billing determinant is the electric power quantified by the

method specified in the Agreement or Transmission Rate Schedule. Scheduled power or metered power will be used.

The transmission customer shall provide necessary information to BPA for any computation required to determine the proper charges for use of the FCRTS, and shall cooperate with BPA in the exchange of additional information which may be reasonably useful for respective operations.

Demand and energy billings for transmission service under each applicable rate schedule shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents through 99 cents to the next higher dollar.

##### 2. Estimated Bills

At its option, BPA may elect to render an estimated bill to be followed at a subsequent billing date by a final bill. The estimated bill shall have the validity of and be subject to the same payment provisions as a final bill.

##### 3. Billing Month

For charges based on scheduled quantities, the billing month is the calendar month. For charges based on metered quantities, the billing month is defined as the interval between scheduled meter-reading dates. The billing month will not exceed 31 days in any case. While it may be necessary to read meters on a day other than the scheduled meter-reading date, for determination of billing demand, the billing month will cease at 2400 hours on the last scheduled meter-reading date. Schedules will be predetermined. The customer must give 30 days notice to request a change to the schedule.

4. Due Date

Bills shall be due by close of business on the 20th day after the date of the bill (due date). Should the 20th day be a Saturday, Sunday, or holiday (as celebrated by the customer), the due date shall be the next following business day.

5. Late Payment

Bills not paid in full on or before close of business on the due date shall be subject to a penalty charge of \$25. In addition, an interest charge of one-twentieth percent (0.05 percent) shall be applied each day to the sum of the unpaid amount and the penalty charge. This interest charge shall be assessed on a daily basis until such time as the unpaid amount and penalty charge are paid in full.

Remittances received by mail will be accepted without assessment of the charges referred to in the preceding paragraph provided the postmark indicates the payment was mailed on or before the due date. Whenever a power bill or a portion thereof remains unpaid subsequent to the due date and after giving 30 days' advance notice in writing, BPA may cancel the contract for service to the customer. However, such cancellation shall not affect the customer's liability for any charges accrued prior thereto under such agreement.

6. Disputed Billings

In the event of a disputed billing, full payment shall be rendered to BPA and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified above. BPA shall separately account for the disputed amount. If it is determined that the customer is entitled to the disputed

amount, BPA shall refund the disputed amount with interest, as determined by BPA's Office of Financial Management.

BPA retains the right to verify, in a manner satisfactory to the Administrator, all data submitted to BPA for use in the calculation of BPA's rates and corresponding rate adjustments. BPA also retains the right to deny eligibility for any BPA rate or corresponding rate adjustment until all submitted data have been accepted by BPA as complete, accurate, and appropriate for the rate or adjustment under consideration.

7. Revised Bills

As necessary, BPA may render a revised bill.

- a. If the amount of the revised bill is less than or equal to the amount of the original bill, the revised bill shall replace all previous bills issued by BPA that pertain to the specified customer for the specified billing period and the revised bill shall have the same date as the replaced bill.
- b. If a revision causes an additional amount to be due BPA or the specified customer beyond the amount of the original bill, a revised bill will be issued for the difference and the date of the revised bill shall be its date of issue.

## Annual Costs Rate

### A PROPOSED SOUTHERN INTERTIE ANNUAL COST RATE

#### SECTION I. AVAILABILITY

This schedule is applicable to each party (Capacity Owner) that executes a PNW AC Intertie Capacity Ownership Agreement (Agreement). Billings pursuant to this schedule is subject to the Billing Provisions in Exhibit B of the Agreement. This rate schedule shall be effective on the first day of the fiscal year following the earlier of interim or final FERC approval of this rate schedule. Unless otherwise defined in this rate schedule, capitalized terms used in this rate schedule shall have the respective definitions set forth in section 1 of this Agreement.

#### SECTION II. RATE

##### A. Operations

The monthly charge equals:

$$\frac{\text{Operations Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Operations Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Operations Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville’s PNW AC Intertie, operations Indirect Costs for Bonneville’s PNW AC Intertie, and operations Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Operations rate shall be calculated using the forecast Operations Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is

amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Operations Cost shall be calculated using the forecast Operations Cost less the Operations Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **B. Maintenance**

The monthly charge equals:

$$\frac{\text{Maintenance Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Maintenance Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Maintenance Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville’s PNW AC Intertie, maintenance Indirect Costs for Bonneville’s PNW AC Intertie, and maintenance Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Maintenance rate shall be calculated using the forecast Maintenance Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Maintenance Cost shall be calculated using the forecast Maintenance Cost less the Maintenance Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **C. General Plant**

The monthly charge equals:

$$\frac{\text{General Plant Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to General Plant Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the General Plant rate shall be calculated using the General Plant Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for General Plant Cost shall be calculated using the General Plant Cost less the General Plant Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### D. Other Costs

The monthly charge equals:

$$\frac{\text{Other Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Other Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the Other Costs rate shall be calculated using the forecast Other Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Other Costs shall be calculated using the forecast Other Costs less the Other Costs already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **E. Contracts and Rates**

The monthly charge equals:

$$\frac{\text{Contracts and Rates Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Contracts and Rates Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Contracts and Rates Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville’s total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Contracts and Rates Cost is determined in accordance with section VI of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Contracts and Rates Cost determined in accordance with section VI of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Contracts and Rates rate shall be calculated using the forecast Contracts and Rates Costs in the Operating Plan in effect during the



month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Contracts and Rates Cost shall be calculated using the forecast Contracts and Rates Cost less the Contracts and Rates Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **F. Power Scheduling**

The monthly charge equals:

$$\frac{\text{Power Scheduling Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Power Scheduling Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Power Scheduling Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Power Scheduling Cost is determined in accordance with section VII of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Power Scheduling Cost determined in accordance with section VII of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Power Scheduling rate shall be calculated using the forecast Power Scheduling Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan

pertains, the monthly charge for Power Scheduling Cost shall be calculated using the forecast Power Scheduling Cost less the Power Scheduling Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **G. End of Term**

The monthly charge shall equal:

$$\frac{\text{End of Term Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to End of Term Costs, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“End of Term Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the End of Term rate shall be calculated using the forecast End of Term Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for End of Term Costs shall be calculated using the forecast End of Term Costs less the End of Term Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **H. Replacements and Reinforcements**

1. For each Replacement, the charge equals:

$$\text{Replacement Cost} * \text{Capacity Ownership Percentage}$$

2. For each Reinforcement, the charge equals:

$$\text{Reinforcement Cost} * \text{Capacity Ownership Percentage}$$

Where

"Replacement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Replacement Cost does not include capitalized general plant cost. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Reinforcement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Reinforcement Cost does not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The charge for the Replacements and Reinforcements rate shall use the actual Replacement Cost and Reinforcement Cost in the Operating Plan.

### **SECTION III. ADJUSTMENTS**

If an amendment to the Operating Plan results in a net amount that Bonneville owes the Capacity Owners pursuant to sections II.A-G or pursuant to section II.H, Bonneville shall refund such net amount pursuant to paragraph 9(f)(4) of the Agreement.

The monthly charges assessed Capacity Owners under sections II.A-G shall be adjusted, and payment or refund made with interest, pursuant to paragraphs 9(b)(2) or 9(f)(4) of the Agreement, to reflect amendments to the Operating Plan that occur after the year to which such Operating Plan pertains.

A Capacity Owner's share of the adjustment shall be determined using the same Capacity Ownership Percentage used in the billings under sections II.A-G during the fiscal year that such Operating Plan is effective.

**B. BILLING PROVISIONS**

**I. General Provisions**

**A. Approval of Rates**

The annual costs rate shall become effective upon interim approval or upon final confirmation and approval by FERC. Bonneville will request FERC approval of such rate schedule effective on the first day of a Bonneville fiscal year.

**B. Application of Billing Provisions**

These Billing Provisions shall apply to bills rendered by Bonneville pursuant to the annual costs rate.

**C. Definition of Terms**

The meaning of terms used in the AC-95 rate shall be as defined in the Agreement or, if no definition is provided by the Agreement, such terms shall be defined according to applicable Federal law.

**II Billing Information**

**Payment of Bills**

Charges pursuant to the AC-95 rate shall be included in Bonneville's monthly power bill to Capacity Owner. Failure to receive a power bill shall not release Capacity Owner from liability for payment. Power bills for amounts due of \$50,000 or more must be paid by direct wire transfer. If Capacity Owner anticipates special difficulties in meeting this requirement, Capacity Owner may request and Bonneville may approve an exemption from this requirement. Power bills for amounts due Bonneville under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by Bonneville. The procedures to be followed in making direct wire transfers will be provided by Bonneville's Financial Services Group and updated as necessary.

**(1) Computation of Bills**

**(a) Bonneville shall bill Capacity Owner in accordance with the annual costs rate.**

(b) Capacity Owner shall provide necessary information to Bonneville for any computation required to determine proper charges pursuant to the Agreement and shall cooperate with Bonneville in the exchange of additional information which may be reasonably useful for respective operations.

(c) Bills rendered pursuant to this Agreement shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents to 99 cents to the next higher whole dollar.

(2) Billing Month

For charges pursuant to the annual costs rate the billing month shall be the same as for the power bill rendered by Bonneville to Capacity Owner.

(3) Due Date

Charges pursuant to the annual costs rate shall be included in the power bill rendered by Bonneville to Capacity Owner and shall be due as part of the power bill when such power bill is due.

(4) Late Payment

The penalties for failure to pay a bill in full on or before close of business on the due date shall be the same as those contained in the late payment provisions in Bonneville's General Transmission Rate Schedule Provisions in effect on the date of the bill; provided, however, that no other provision of any such General Transmission Rate Schedule Provisions, including, but not limited to, provisions regarding cancellation, termination, or suspension of service, shall have application with respect to the payment of any rate or charge pursuant to the annual costs rate set forth in Exhibit B. Bonneville's right to suspend service for late payment under the Agreement shall be pursuant to paragraph 9(e)(1) of this Agreement, which right shall in no way be limited by this section.

(5) Disputed Bills

In the event of a disputed bill, full payment shall be rendered to Bonneville and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified in section II(4) of the Billing Provisions of this Exhibit B. Bonneville shall separately account for the disputed amount. If it is determined that Capacity Owner is entitled to the disputed amount, Bonneville shall refund the disputed amount with interest, such interest to

be determined by Bonneville's Financial Services Group. In the event that Bonneville and Capacity Owner do not resolve such dispute, Capacity Owner shall not be prevented by this section II(5) of the Billing Provisions of this Exhibit B from initiating arbitration pursuant to and to the extent allowed by section 15 of this Agreement.

(6) Revised Bills

If Bonneville determines that it has over- or under-charged Capacity Owner due to a computational error or pursuant to an amendment to the Operating Plan in any given billing month, Bonneville may render to Capacity Owner a revised bill.

(i) If the amount of the revised bill is less than or equal to the amount of the original bill for such billing month, the revised bill shall replace the original bill issued by Bonneville. The revised bill shall have the same date as the original bill.

(ii) If the amount of the revised bill is greater than the amount of the original bill for such billing month, a new bill will be issued for the difference between the revised bill and the original bill. The date of the new bill shall be its date of issuance, and Capacity Owner shall make payment to Bonneville as specified in the Billing Provisions of this Exhibit B.

**Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share**

Capacity Ownership Share = 160 MW

Capacity Ownership Percentage = Capacity Ownership Share ÷ Bonneville's PNW AC Intertie Rated Transfer Capability<sup>1</sup>

Scheduling Percentage = Capacity Ownership Share ÷ PNW AC Intertie Rated Transfer Capability

Scheduling Share = Scheduling Percentage × PNW AC Intertie Operational Transfer Capability

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<sup>1/</sup> As of the Effective Date, Bonneville's PNW AC Intertie Rated Transfer Capability in a north-to-south direction, calculated in accordance with the Northwest Intertie Agreements equals 3450 MW (total PNW AC Intertie Rated Transfer Capability (4800 MW) – Portland's PNW AC Intertie Rated Transfer Capability (950 MW) – PacifiCorp's PNW AC Intertie Rated Transfer Capability (400 MW)).



**Lump Sum Payment Calculation**

**A. SECOND 800 MW COSTS, ESTIMATED<sup>1</sup>, ACTUAL<sup>2</sup>, AND REVISED ACTUAL<sup>3</sup>**

	(\$ in Thousands)		
	(1)	(2)	
<u>Facilities whose costs will be adjusted using change Between Estimate and Actual</u>	<u>BPA's Costs Estimated</u>	<u>BPA's Costs Actual</u>	<u>BPA's Costs Revised Actual</u>
1. Alvey (Marion-Alvey Caps)	\$5,739		
2. Slatt (Loop in - Breaker)	3,044		
3. Grizzly (BPA Breakers)	11,044		
4. Loop into Slatt	656		
5. Malin-Meridian loop into Captain Jack	982		
6. Alvey Substation - BPA	8,168		
7. Dixonville - PacifiCorp	8,635		
8. Meridian - PacifiCorp	6,548		
9. Power System Control	3,575		
10. Alvey-Spencer - BPA	1,346		
11. Spencer-Dixonville - PacifiCorp	20,388		
12. Dixonville-Meridian - PacifiCorp	<u>32,140</u>		
SUBTOTAL	102,265		
 <u>Facilities whose costs will be adjusted using Change Between Estimate and Actual, multiplied by 50 percent</u>			
13. Captain Jack (BPA Breakers)	\$14,335		
14. Captain Jack (Communication and Control)	5,100		
15. Captain Jack (Series Capacitors)	722		
16. Power System Control	5,596		
17. Captain Jack line to Oregon-Calif. border	<u>5,724</u>		
SUBTOTAL	\$31,477		
50 PERCENT OF SUBTOTAL	<u>15,739</u>		
TOTAL	<u>\$118,004</u>		

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- 1/ Based on mid-1989 program planning levels.
- 2/ Actual costs will be available approximately December 1995, or as soon as practicable thereafter. Supporting documentation will be provided including work orders and accounting data for each line item.
- 3/ For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the revised actual costs of facilities pertaining to each such calculation of the Revised Adjusted Capacity Ownership Price.

**B. INITIAL, ADJUSTED, AND REVISED ADJUSTED CAPACITY OWNERSHIP PRICE<sup>1</sup>**

		(\$ in Millions)		
		(1)	(2)	
<u>Cost Item</u>		Initial Capacity Ownership Price	Adjusted Capacity Ownership Price	Revised Adjusted Capacity Ownership Price <sup>2</sup>
1.	Second 800 MW	\$118	\$___	\$___
2.	AFUDC <sup>3</sup> on Second 800 MW	+ 19	+ ___	+ ___
3.	Existing Support Facilities	+ <u>19.1</u>	+ <u>19.1<sup>4</sup></u>	+ <u>19.1<sup>4</sup></u>
4.	Total Cost <sup>5</sup>	\$156	\$___	\$___
5.	PRICE PER KW (CO-94) <sup>6</sup>	<u>\$215</u>	\$___	\$___

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- 1/ Initial, Adjusted, and Revised Adjusted Capacity Ownership Price are determined in accordance with the CO-94 rate in Exhibit A.
  - 2/ Bonneville may make multiple calculations of the Revised Adjusted Capacity Ownership Price pursuant to paragraph 9(a)(3). For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the column pertaining to such calculation and the columns for any previous calculations of the Revised Adjusted Capacity Ownership Price.
  - 3/ AFUDC will be calculated in accordance with the CO-94 rate in Exhibit A.
  - 4/ Not adjusted in calculating the Adjusted Capacity Ownership Price or the Revised Adjusted Capacity Ownership Price.
  - 5/ Bonneville's indirect costs and overhead costs shall be included. Such indirect costs and overhead costs shall be allocated or distributed to the Third AC Intertie Project using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Third AC Intertie Project was under construction. Such allocation or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's Third AC Intertie Project than with respect to any other transmission projects under construction at the same time.
  - 6/ Price per kW is derived by dividing the Total Cost by 725 MW.

C. INITIAL LUMP SUM PAYMENT

1.	Seattle's Capacity Ownership Share	=	160 MW
2.	Initial Capacity Ownership Price	X	\$215 (\$215,000/MW)
3.	Initial Lump Sum Payment <sup>1</sup>	=	\$34,400,000
4.	Deduction: Negotiation Deposit with Interest <sup>2</sup>	-	
5.	Due to Bonneville:	=	

1/ Initial Lump Sum Payment is calculated in accordance with section IV.A of the CO-94 rate in Exhibit A.

2/ Interest is calculated as specified in Bonneville's April 23, 1993, letter to Seattle. The rate of interest for the computation is the interest rate applicable to 3-month Treasury Bills as specified in the FEDERAL RESERVE Statistical Release G.13. The rates are determined for the 3-month yield reported on the first day of the month of receipt of the negotiation deposit and on the first day of each subsequent third month thereafter. Interest is compounded quarterly from May 11, 1993, through the date Bonneville receives payment pursuant to paragraph 9(a)(1).

D. ADJUSTED LUMP SUM PAYMENT

1.	Seattle's Capacity Ownership Share	=	160 MW
2.	Adjusted Capacity Ownership Price	X	\$
3.	Adjusted Lump Sum Payment <sup>1</sup>	=	.
4.	Initial Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Seattle	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Seattle	=	

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<sup>1/</sup> Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A.

<sup>2/</sup> Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from the date Bonneville receives payment pursuant to paragraph 9(a)(1) through the date Bonneville or Seattle receives payment pursuant to subparagraph 9(a)(2)(B).

**E. REVISED ADJUSTED LUMP SUM PAYMENT**

1.	Seattle's Capacity Ownership Share	=	160 MW
2.	Current Revised Adjusted Capacity Ownership Price	X	\$
3.	Current Revised Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Adjusted Lump Sum Payment/immediately preceding Revised Adjusted Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Seattle	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Seattle	=	

1/ Revised Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A. Bonneville will calculate a Revised Adjusted Lump Sum Payment each time a Revised Adjusted Capacity Ownership Price is calculated pursuant to paragraph 9(a)(3).

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from (a) the date Bonneville or Seattle receives payment with respect to the Adjusted Lump Sum Payment pursuant to paragraph 9(a)(2)(B) or (b) the date Bonneville or Seattle receives payment with respect to the Revised Adjusted Lump Sum Payment immediately preceding the current Revised Adjusted Lump Sum Payment through the date Bonneville or Seattle receives payment with respect to the current Revised Adjusted Lump Sum Payment pursuant to subparagraph 9(a)(3)(B).

**Transmission Loss Factors**

- A. The transmission loss factor to be applied to Seattle's schedules for transactions transmitted on Seattle's Scheduling Share shall be 2.5 percent.
- B. The transmission loss factor to be applied to Seattle's schedules for transactions transmitted pursuant to subparagraph 3(b)(1)(C) shall be 3.0 percent.

**Bonneville's PNW AC Intertie**

**A. TRANSMISSION LINE FACILITIES**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>McNary-John Day 500 kV Line Loop into Slatt:</u>	100	100
• McNary-Slatt Str. 108/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. 1/1 to substation dead end tower, 194 meters		
2. John Day-Grizzly No. 1 500 kV	100	100
3. John Day-Grizzly No. 2 500 kV	100	100
4. Grizzly-Captain Jack No. 1 500 kV	100	100
5. Captain Jack-Malin No. 1 500 kV	100	100
6. Buckley-Grizzly 500 kV	100	57
7. Grizzly-Summer Lake 500 kV	100	57
8. 500 kV double circuit between Buckley and Marion that supports the Buckley- Marion No. 1 and the Ashe-Marion No. 2 500 kV circuits (Str. No. 1/3 to Marion, 159 km)	100	25
9. Marion-Alvey 500 kV	100	50
10. Captain Jack-COB (10 km) 500 kV	100	100
11. Alvey-Dixonville 500 kV	50	100
12. Dixonville-Meridian 500 kV	50	100

**B. SUBSTATION FACILITIES 1/2/**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>Slatt 500 kV (Dispatch one-line diagram No. 228962)</u>		
<u>John Day line terminal</u>		
• New Breaker D#5021	100	100
• Existing 500 kV MOD D#5020/7022	100	100
• New 500 kV MOD D#5022	100	100
• Existing 500 kV MOD D#5019	100	50
• Existing Breaker D#5018	100	50

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>McNary line terminal</u>		
• 500 kV MOD D#5023/7847	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General		
2. <b>John Day 500 kV</b> (Dispatch one-line diagram No. 132281)		
<u>Grizzly No.2 line terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4132	100	50
• MOD D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No.1 line terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General		
3. <b>Buckley 500 kV, Gas Insulated Substation</b> (Dispatch one-line diagram No. 232583)		
<u>Slatt No. 1 line terminal</u>		
• Breaker D#4967	100	57
• Isolating switch D#4966/7328	100	57
• Isolating switch D#4968/7355	100	57
• Ground switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 line terminal</u>		
• Breaker D#4961	100	57



% APPLICABLE TO  
% BPA OWNED   PNW AC INTERTIE

• Isolating switch D#4960/7312	100	57
• Isolating switch D#4962/7313	100	57
• Ground switch D#7311	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 line terminal</u>		
• Breaker D#4964	100	57
• Isolating switch D#4963/7314	100	57
• Isolating switch D#4965/7321	100	57
• Ground switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General		
4. <b>Marion 500 kV</b> (Dispatch one-line diagram No. 136180)		
<u>Buckley line terminal</u>		
• Breaker D#4389	100	50
• Breaker D#4386	100	25
• MOD D#4387	100	25
• MOD D#4390	100	50
• MOD D#4388/7751	100	50
• Associated Line PTs	100	50
<u>Alvey line terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4376	100	25
• MOD D#4375/7922	100	50
• MOD D#4373	100	50
• Associated Line PTs	100	50
Station General		
5. <b>Alvey 500 kV</b> (Dispatch one-line diagram No. 121424)		
<u>Bank No. 5 terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD D#5090	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#5089/8157	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 line terminal</u>		
• Breaker D#5084	50	100
• MOD D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 line terminal</u>		
• Breaker D#5087	50	100
• MOD D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV line)</u>	50	100
• MODs D#5100/8160,5101/8159, 5102/8158	50	100
• Bypass breaker D#5103	50	100

6. **BPA/PacifiCorp Dixonville 500 kV Station** (PacifiCorp's one-line diagram PD-40020)

Note: PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Ammendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299, as revised or amended.

For Alvey and Meridian line terminals

• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of line terminal PTs	50	100
• Two sets of line terminal arresters	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

<ul style="list-style-type: none"> <li>• Series Capacitor Bank in Alvey-Dixonville 500 kV line and associated isolating devices</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• 180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices</li> </ul>	50	100
Station General		
7. <b>BPA/PacifiCorp Meridian 500 kV Yard</b> (PacifiCorp's one-line diagram PD-32976)		
<p><b>Note:</b> PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299.</p>		
<u>For Dixonville line terminal</u>		
<ul style="list-style-type: none"> <li>• Breakers 11R2, 11R6</li> </ul>	50	50
<ul style="list-style-type: none"> <li>• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• One set of line PTs</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• One set of line terminal arresters for the Dixonville line and one set for the Captain Jack line</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV line and associated isolating devices.</li> </ul>	50	100
Station General		
8. <b>Grizzly 500 kV</b> (Dispatch one-line diagram No. 103924)		
<u>John Day No. 1 line terminal</u>		
<ul style="list-style-type: none"> <li>• Breaker D#4058</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• Breaker D#5040</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• MOD D#4059</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• MOD D#4057/7848</li> </ul>	100	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4056	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 line terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 line terminal</u>		
• Breaker D#5031	100	100
• Breaker D#5028	100	100
• MOD D#5032	100	100
• MOD D#5030/8122	100	100
• MOD D#5029	100	100
• MOD D#5027	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#5037	100	100
• Breaker D#5034	100	100
• MOD D#5038	100	100
• MOD D#5036/8123	100	100
• MOD D#5035	100	100
• MOD D#5033	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake line terminal</u>		
• Breaker D#5025	100	100
• MOD D#5026/8121	100	100
• MOD D#5024	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

	<u>180 MVAR Reactor Bank No. 1</u>	100	100
	• Breaker D#4222	100	100
	• Isolating Switch D#4060	100	100
	• Associated Arresters	100	100
	<u>300 MVAR Reactor Bank No. 2</u>	100	100
	• Breaker D#4720	100	100
	• Isolating Switch D#4719	100	100
	• Associated Arresters	100	100
	• 300 MVAR Reactor Bank No. 3 and Neutral Reactor	100	100
	• Breaker D#4038	100	100
	• Isolating Switch D#4062	100	100
	• Neutral isolating switch D#4109/4081	100	100
	• Associated Arresters	100	100
	• Associated PTs	100	100
	• North Main Bus 500 kV PTs	100	100
	• South Main Bus 500 kV PTs	100	100
	Station General		
9.	<b>Sand Spring 500 kV Compensation Station</b> (Dispatch one- line diagram No. 142239)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
10.	<b>Fort Rock 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142237)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
11.	<b>Sycan 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142238)		

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Summer Lake-Malin line) and associated equipment but <b>excluding</b> the bypass MOD D#5065 and transmission tower	65	100
	Station General		
12.	<b>Summer Lake 500 kV</b> (Dispatch one-line diagram No. 232667)		
	<u>Grizzly line terminal</u> (formerly Buckley-Ponderosa Tap)		
	• Breaker D#4959	100	57
	• MOD D#4955	100	57
	• MOD D#4956/7309	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Malin line terminal</u>		
	• Line protective relays	0	100
	Station General		
13.	<b>Malin 500 kV</b> (Dispatch one-line diagram No. 103923)		
	<u>Captain Jack No. 1 line terminal</u>		
	• Breaker D#4066	100	100
	• Breaker D#4064	100	100
	• MOD D#4068	100	100
	• MOD D#4067/7849	100	100
	• MOD D#4065	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 1 terminal</u>		
	• Breaker D#4186	50	100
	• MOD D#4063/7970	100	100
	• MOD D#4185	50	100
	• MOD D#4187	50	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 2 terminal</u>		

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

• Breaker D#4582	50	100
• MOD D#4583	50	100
• MOD D#4581	50	100
• MOD D#4074/7856	75	100
<u>Grizzly No. 2/Round Mountain No. 2 line position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
<u>North Main Bus 500 kV PTs</u>	100	100
<u>South Main Bus 500 kV PTs</u>	50	100
<u>300 MVAR Shunt Reactor Bank No. 1 and associated arresters and isolating devices (D#4327, 4393)</u>	100	100
<u>2-239 MVAR Shunt Cap. Banks and associated isolating devices (D#4183, 4181, 4184, 4182, 8065, 8066)</u>	100	100
<u>Line protective relays for Summer Lake line</u>	0	100
Station General		
14. <b>Captain Jack 500 kV (Dispatch one-line diagram No. 248548)</b>		
<u>Series Cap. Bank No. 1 (Captain Jack-Olinda line)</u>	100	100
• MODs D#4974/8101, 4973/8099, 4975/8100	100	100
• Bypass breaker D#4971, 4972		
<u>Grizzly No. 1 line terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD D#4991/8104	100	100
• MOD D#4992	100	100
• MOD D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 line terminal</u>		
• Breaker D#4996	100	100

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• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Olinda No. 1 line terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
<u>North Main Bus 500 kV PTs</u>	100	100
South Main Bus 500 kV PTs	100	100
Station General		
<b>15. Chief Joseph Substation (Dispatch one-</b>		
<b>line diagram No. 124313)</b>		
<u>230 kV, 1400 MW Braking Resistor</u>	100	100
Includes breaker dispatch No. A-594, a high speed vacuum switch and one 230 kV isolating switch in Bay 12		
Station General		

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 1/ Station General will be allocated to each substation according to Bonneville's standard methodology.

2/ Each substation includes associated relays.



**Capacity Owners**

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
PNGC	DE-MS79-94BP94523	50	1.4
Puget	DE-MS79-94BP94521	400	11.6
Seattle	DE-MS79-94BP94522	160	4.6
Snohomish	DE-MS79-94BP94525	42	1.2
Tacoma	DE-MS79-94BP94524	41	1.1

PNGC: Pacific Northwest Generating Cooperative

Puget: Puget Sound Power & Light Company

Seattle: City of Seattle, City Light Department

Snohomish: Public Utility District No. 1 of Snohomish County

Tacoma: Tacoma Public Utilities

**Provisions Required by Statute or Executive Order**

1. Contract Work Hours and Safety Standards Act (40 U.S.C. & 327, et seq.).

(a) Overtime Requirements.

Seattle, contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation: liability for unpaid wages; liquidated damages.

In the event of any violation of the provisions set forth in section 1 of this Exhibit H, Seattle and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, Seattle and such subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in section 1 of this Agreement in the sum of \$10.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provision set forth in section 1 of this Exhibit.

(c) Withholding for unpaid wages and liquidated damages.

The person designated in writing by Bonneville's Administrator with the Authority to enter into, administer, modify, suspend or terminate this Exhibit, make related determinations and findings and bind Bonneville only to the extent of delegated authority shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Seattle or its subcontractor, if any, under any such

contract or any other federal contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of Seattle or such subcontractor for unpaid wages and liquidated damages as provided in section 2 of this Exhibit.

2. Convict Labor (Exec. Order No. 11755, Dec. 29, 1979).

In connection with the performance or work under this Agreement, Seattle and any subcontractor, if any agrees not to employ any person undergoing sentence of imprisonment except as otherwise provided by law.

3. Equal Opportunity (Exec. Order No. 11246, Sep. 24, 1965).

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), Seattle has been or is awarded nonexempt federal contracts and/or subcontracts that have an aggregate value in excess of \$25,000.00, Seattle shall comply with sections 3(b)(1) through 3(b)(11) below. Upon request, Seattle shall provide information necessary to determine the applicability of this clause.

(b) During performance of this Agreement, Seattle agrees as follows:

(1) Seattle shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

(2) Seattle shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: (1) employment; (2) upgrading; (3) demotion; (4) transfer; (5) recruitment or recruitment advertising; (6) layoff or termination; (7) rates of pay or other forms of compensation; and (8) selection for training, including apprenticeship.

(3) Seattle shall post in conspicuous places, available to employees and applicants for employment, the notices that explain this clause, such notices to be provided by the person designated in writing by Bonneville's Administrator with the authority to enter into, administer, modify, suspend or terminate this Agreement, make related determinations and findings and bind Bonneville only to the extent of delegated authority (Contracting Officer).

(4) Seattle shall, in all solicitations or advertisements for employees placed by or on behalf of Seattle, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(5) Seattle shall send, to each labor union or representative or of workers with which it has a collective bargaining agreement or other contract or understanding, the notice provided by the Contracting Officer advising the labor union or workers' representative of Seattle's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) Seattle shall comply with Executive Order No. 11246, Sep. 24, 1965 (30 Fed. Reg. 12319), as amended, and the rules, regulations and orders of the Secretary of Labor.

(7) Seattle shall furnish to Bonneville all information required by Executive Order No. 11246, as amended, and by the rules, regulations and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award of this contract, unless filed within 12 months preceding the date of the award of this contract.

(8) Seattle shall permit access to its books, records and accounts by Bonneville or the Office of Federal Contract Compliance Programs (OFCCP) for purpose of investigation to ascertain Seattle's compliance with such rules, regulations and orders.

(9) If the OFCCP determines that Seattle is not in compliance with this clause or any rule, regulation or order of the Secretary of Labor, this Agreement may be canceled, terminated, or suspended in whole or in part and Seattle may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order No. 11246, as amended. In addition, sanctions may be imposed and remedies invoked against Seattle as provided in Executive Order No. 11246, as amended, the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10) Seattle shall include the terms and conditions of sections 3(b)(1) through 3(b)(11) of this Exhibit in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) Seattle shall take such action with respect to any subcontract or purchase order as may direct as means of enforcing these terms and conditions, including sanctions for noncompliance: Provided, that if Seattle becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, Seattle may request the Government to enter into the litigation to protect the interest of the United States.

(c) Notwithstanding any other clause in this Agreement, disputes relative to this clause will be governed by the procedures in 41 CFR § 66-1.1.

4. Certification of Non-segregated Facilities (48 CFR § 22.810).

(a) Seattle certifies that it does not and will not maintain or provide for employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. Seattle agrees that a breach of this certification is a violation of section 3 (the Equal Opportunities Clause) of this Exhibit.

(b) Seattle agrees that it will (1) obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; (2) retain such certifications in its files (3) forward the following notice to such proposed subcontractors, except where the proposed subcontractors have submitted identical certifications of specific time periods:

"Notice to Prospective Subcontractors of Requirement for  
Certifications of Non-segregated Facilities.

"A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. This certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually)."

5. Officials Not to Benefit (41 U.S.C. § 22).

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement or to any benefit arising from it. However, this clause does not apply to this Agreement to the extent that this Agreement is made with a corporation for the corporation's general benefit.

6. Bonneville's Obligations Not General Obligations of the United States (16 U.S.C. § 839(j)).

None of the offerings of obligations, or promotional materials for such obligations, which may be offered by Seattle to fund its activities pursuant to this Agreement, shall be construed to be, general obligations of the United States, nor are such obligations intended to be or are they secured by the full faith and credit of the United States.

7. Small Business Act (15 U.S.C. §§ 631 and 637).

(a) It is the policy of the Government that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any federal agency.

(b) Seattle hereby agrees to carry out the policy set forth in 7(a) in awarding subcontracts to the fullest extent consistent with the efficient performance of this Agreement. Seattle further agrees to cooperate on any studies or surveys as may be conducted by the United States Small Business Administration or Bonneville as may be necessary to determine the extent of Seattle's compliance with this clause.

(c) As used in this agreement the term "small business concern" shall mean a small business as defined in section 3 of Small Business Act (15 U.S.C. § 632) and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

(1) which is at least 51 percent owned by one or more socially disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

- (2) whose management and daily business operations are controlled by one or more such individuals.

Seattle shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans and other minorities, or any other individual found to be disadvantaged by the United States Small Business Administration pursuant to section 8(a) of the Small Business Act.

- (d) Seattle acting in good faith may rely on written representations by its subcontractor regarding its status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

8. Other Statutes, Executive Orders and Regulations.

- (a) Seattle agrees to comply with the following statutes, executive orders and regulations to the extent applicable:

(1) False Claims Act, 31 U.S.C. § 3729, et seq. Whoever makes or presents to any person or officer in the civil military or naval service of the United States, or to any department or agency thereof, any claim upon or against the United States, or any department or agency thereof, knowing such claim to be false, fictitious or fraudulent, shall be fined not more than \$10,000.00 or imprisoned not more than 5 years, or both;

(2) Rehabilitation Act of 1973, 29 U.S.C. §793, as amended, Executive Order No. 11758, Jan. 15, 1974, and the regulations of the Secretary of Labor, 41 CFR Part 60-250, et seq., which concern affirmative action for handicapped workers;



(3) Vietnam Era Veterans Readjustment Assistance Act of 1972, 38 U.S.C. §§ 101, 102, 240, 241, 1502, 1504, 1507, as amended, and the clauses contained in 41 CFR Part 60-250, et seq., which concern affirmative action for disabled veterans and veterans of the Vietnam Era;

(4) Executive Order No. 11625, Oct. 13, 1971, and implementing regulations which concern utilization of small disadvantaged business concerns;

(5) Anti-Kickback Act, 41 U.S.C. § 51, et seq.; and

(6) Privacy Act of 1974, 5 U.S.C. § 552a.

(b) Seattle agrees to comply with requirements deemed necessary by Bonneville in order to implement Bonneville's obligations under the National Historic Preservation Act of 1966, U.S.C. §§ 470, et seq.

### **Bonneville's PNW AC Intertie Costs**

All costs in sections I through VIII of this Exhibit I shall be subject to the following provisions:

#### **PURPOSE**

Bonneville shall determine and calculate Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs with respect to Bonneville's PNW AC Intertie in accordance with this Exhibit I. None of Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, and End of Term Costs (each of the foregoing for purposes of this sentence, a Cost) shall include any other Cost.

#### **SOURCE OF INFORMATION AND COSTS**

Bonneville shall forecast in accordance with this Exhibit I the costs reflected in any Operating Plan pursuant to Schedules A through H of this Exhibit using the most detailed information available to Bonneville from its budget process at the time the forecast is made. Bonneville shall determine the actual costs reflected in any Operating Plan pursuant to Schedules A through H, using Bonneville's then existing accounting system in accordance with this Exhibit I. All costs reflected in Schedules A through H shall be net of credit.

Bonneville shall determine its overall overhead and overall indirect costs. A portion of Bonneville's overall overhead and indirect costs shall be allocated to such total system operations costs (pursuant to section I below), total system maintenance costs (pursuant to section II below), total capital costs (pursuant to sections III and IV below), Other Costs (pursuant to section V below), Contracts and Rates Costs (pursuant to section VI below), Power Scheduling Costs (pursuant to section VII below), and End of Term Costs (pursuant to section VIII below) using Bonneville's

normal allocation or distribution methodologies for such costs, as such methodologies may be changed by Bonneville from time to time. Such allocations or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's PNW AC Intertie than with respect to other transmission facilities.

Bonneville shall record its costs into its accounting systems in accordance with generally accepted accounting principles. For purposes of this Agreement, "generally accepted accounting principles" means the common set of accounting concepts, standards, and procedures that are adopted by entities (such as the utility industry) for purposes of financial statement disclosure.

Whenever Bonneville alters its accounting system or methods to permit costs referred to in this Exhibit I, which were previously allocated to functions and activities, to be directly assigned to function and activities, then in that event Seattle and Bonneville shall, in concert with the Capacity Owners other than Seattle, in good faith negotiate revisions to this Exhibit I to include such directly assigned costs.

## **COSTS**

### **I. Operations Costs**

#### **A. Operations Costs - Allocation Factor**

The allocation factor (Schedule A, line 3) used to determine the Allocated Direct Cost of Operations Cost, Indirect Cost of Operations Cost, and Overhead Cost of Operations Cost is the ratio of major facility units (MFUs) of Bonneville's PNW AC Intertie operated by Bonneville to MFUs of the Federal Columbia River Transmission System.

An MFU (Schedule A, lines 1 and 2) is any of the following major pieces of power system equipment which, at any given time, is installed on and is a part of the Federal Columbia River Transmission System: substation switchgear (such as power circuit breakers; potential devices; disconnects, load interrupters, hot-stick operated bus links; switching devices, circuit switchers, ground switches; and switchyard equipment terminals); protective

equipment (such as grounding devices; reactors; arrestors and resistors; voltage regulators; engine generators and motor generators; and high voltage fuses); transformation equipment (such as power transformers; diesel generators; grounding transformers; regulators and shunt reactors; synchronous condensers; and shunt or series capacitors); station equipment (such as switchyard lighting, batteries and chargers, air compressors, station service equipment, and lightening arrestors); instruments, control, and supervisory equipment (such as switchboards, instruments, and control panels; relay panels, transfer trip, and single-pole relaying; and oscillographs; fault detectors and locators; sequential events recorders, supervisory control, and data acquisition equipment; and indicating meters, instruments, and loggers); and equipment specific to direct current and static var compensator stations (such as mercury arc valves; thyristor systems; air handling packages; water control packages; harmonic filtering systems; motor control centers, such as fans, pumps, and dampening resistors; and valve damping resistors); or devices that perform similar types of functions.

Once each fiscal year, Bonneville shall count the number of MFUs on Bonneville's PNW AC Intertie (exclusive of facilities operated by others) (Schedule A, line 1) and the number of MFUs on the Federal Columbia River Transmission System (Schedule A, line 2). In calculating the forecast Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs, Bonneville shall use the most recent MFU count available at the time of such calculation in developing its initial Operating Plan for a given fiscal year. For each Operating Plan which is for the same fiscal year, Bonneville shall use the same MFU count in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**B. Operations Costs - Operations Functionalization Factor**

For each Operating Plan, Bonneville's total system operations direct cost, indirect cost and overhead cost (Schedule A, lines 7, 9, and 11) shall be adjusted by an operations functionalization factor (Schedule A, line 6) so that

Capacity Owners pay only transmission-related system operations costs. The operations functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using the costs developed for the last year of the rate period for which Bonneville has developed rates, the operations functionalization factor shall be the ratio of (a) Bonneville's total system operations cost functionalized to transmission (Schedule A, line 4) over (b) Bonneville's total system operations cost (Schedule A, line 5). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**C. Operations Costs - Allocated Direct Costs**

For each Operating Plan, Bonneville shall allocate its total system operations direct costs as set forth in Schedule A, lines 7 and 8, to determine Allocated Direct Costs of Operations Cost (Schedule A, line 8).

Schedule A, line 7, shall reflect Bonneville's total system operations direct costs for a fiscal year. Bonneville's total system operations direct costs for a fiscal year shall include all system operations expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: substation operations (which provides for, among other things, making equipment adjustments to maintain loads and voltages within acceptable limits, switching to deenergize lines and equipment during maintenance outages, isolating damaged equipment, restoring service to customers, visually inspecting equipment, and reading meters that record line and equipment loading and voltages), power system control and dispatching (which provides for, among other things, central dispatching, control, and monitoring of the electric operation

Effective on the effective date of Exhibit B

of the Federal transmission system; load, frequency, and voltage control of Federal generating plants; the operating of the system control and data computers at the Dittmer and Eastern Control Centers; and modification and maintenance of the operation-related computers), and operations standards and engineering (which provides for, among other things, analyzing system loads, voltage levels, outage information, stability levels, and other data; making policy recommendations for system operations; planning operations' practices, restoration plans and disturbance ports; development of control center requirements for centralized automation of substations and generation; and Bonneville's participation with other utilities in developing utility operating standards and guides); and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 8, shall reflect Allocated Direct Cost of Operations Cost.

**D. Operations Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system operations indirect costs as set forth in Schedule A, lines 9 and 10, to determine Indirect Costs of Operations Costs.

Schedule A, line 9, shall reflect Bonneville's total system operations indirect costs for a fiscal year. Bonneville's total system operations indirect costs for a fiscal year shall include all system operations indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: general supervision and management, office support, planning, budgeting, training, direction of facilities' operation, and other system operations activities undertaken by Bonneville that are

consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 10, shall reflect Indirect Cost of Operations Cost.

**E. Operations Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system operations overhead costs as set forth in Schedule A, lines 11 and 12, to determine Overhead Costs of Operations Costs.

Schedule A, line 11, shall reflect Bonneville's total system operations overhead costs for a fiscal year. Bonneville's total system operations overhead costs for a fiscal year shall include all system operations overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system operations overhead activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule A, line 12, shall reflect Overhead Cost of Operations Cost.

Schedule A, line 13, shall reflect Operations Cost.

## **II. Maintenance Costs**

### **A. Maintenance Costs - Power System Control Maintenance Functionalization Factor**

For each Operating Plan, the Power System Control (PSC) maintenance cost (Schedule B, line 4) shall be adjusted by a PSC maintenance functionalization factor (Schedule B, line 3). PSC maintenance is the testing, repair, and engineering support for Bonneville's communications and control systems. The PSC maintenance functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs for the last year of the rate period for which Bonneville has developed rates, the PSC functionalization factor shall be the ratio of (a) Bonneville's total PSC maintenance cost functionalized to transmission from such general rate case (Schedule B, line 1) over (b) Bonneville's total PSC maintenance cost from such general rate case (Schedule B, line 2).

### **B. Maintenance Costs - Direct Costs**

The Direct Costs of Maintenance Costs for a fiscal year (Schedule B, line 7) shall be Bonneville's direct costs of maintaining Bonneville's PNW AC Intertie and shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities for maintenance of Bonneville's PNW AC Intertie: transmission line maintenance; substation maintenance; power system control



maintenance; nonelectric plant maintenance; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of Bonneville's PNW AC Intertie undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

With the exception of PSC maintenance costs, Bonneville shall specifically identify the direct costs of maintaining Bonneville's PNW AC Intertie (Schedule B, line 7). To determine PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6), the total PSC direct maintenance cost (Schedule B, line 4) shall be multiplied by (a) the PSC maintenance functionalization factor (Schedule B, line 3) and (b) the MFU allocation factor (Schedule B, line 5) set forth in Schedule A, line 3. The Direct Costs of Maintenance Costs (Schedule B, line 8) shall be the sum of (a) PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6) and (b) the direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost (Schedule B, line 7).

**C. Maintenance Costs - Allocation Factor**

The allocation factor (Schedule B, line 10) used to determine Indirect Cost of Maintenance Cost and Overhead Cost of Maintenance Cost shall be the ratio of the Direct Cost of Maintenance Cost (Schedule B, line 8) to Bonneville's total system maintenance direct cost (Schedule B, line 9), as described below.

Schedule B, line 9, shall reflect Bonneville's total system maintenance direct costs for a fiscal year. Bonneville's total system maintenance direct costs for a fiscal year shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred

by Bonneville in connection with the performance of any of the following activities: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; establishing, monitoring, and updating system maintenance standards, policies, and procedures; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of the Federal Columbia River Transmission System undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 10, shall reflect the percentage which shall be used to allocate Bonneville's total system maintenance indirect cost and total system maintenance overhead cost to Bonneville's PNW AC Intertie.

**D. Maintenance Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance indirect costs as set forth in Schedule B, lines 11 and 12, to determine Indirect Costs of Maintenance Costs.

Schedule B, line 11, shall reflect Bonneville's total system maintenance indirect costs for a fiscal year. Bonneville's total system maintenance indirect costs for a fiscal year shall include all system maintenance indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance any of the following activities: supervision and management, office support, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other system maintenance activities

undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 12, shall reflect Indirect Cost of Maintenance Cost.

**E. Maintenance Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance overhead costs as set forth in Schedule B, lines 13 and 14, to determine Overhead Costs of Maintenance Costs.

Schedule B, line 13, shall reflect Bonneville's total system maintenance overhead costs for a fiscal year. Bonneville's total system maintenance overhead costs for a fiscal year shall include all system maintenance overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system maintenance overhead activities undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule B, line 14, shall reflect Overhead Cost of Maintenance Cost.

Schedule B, line 15, shall reflect Maintenance Cost.

**III. Replacement Costs and Reinforcement Costs**

**A. Replacement Costs and Reinforcement Costs - Direct Costs**

The Direct Costs for Replacements and Reinforcements for a fiscal year (Schedule C, line 1) shall be Bonneville's direct capital costs for Replacements and Reinforcements for such fiscal year and shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, land, materials and equipment, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of the following activities: planning, environmental analyses and mitigation, survey, design, land, materials and equipment, turnkey contracts, contract construction, force account construction, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council. The Direct Costs for any Replacement or Reinforcement for a fiscal year shall also include the costs of removal and any salvage credits with respect to any PNW AC Intertie facility removed on account of such Replacement or Reinforcement.

**B. Replacement Costs and Reinforcement Costs - Indirect Costs and Overhead Costs**

For each Replacement and Reinforcement project, the Indirect Costs and Overhead Costs for Replacements and Reinforcements (Schedule C, line 2) shall be allocated or distributed to such Replacements and Reinforcements using the indirect and overhead allocation and distribution methodologies

employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Replacements and Reinforcements are under construction. Schedule C, line 2, shall reflect the Indirect Costs and Overhead Costs of Replacements and Reinforcements.

Indirect Costs of Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel expenses, service contracts, consulting contracts, administration of materials, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: supervision, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Overhead Costs for Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other costs, each of which being which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services;

area offices; operations, maintenance, and construction; and engineering); and (c) other replacement and reinforcement activities undertaken by Bonneville that are consistent with replacement and reinforcement activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

**C. Replacement Costs and Reinforcement Costs - Allowance for Funds Used During Construction (AFUDC)**

Schedule C, line 3, shall reflect AFUDC for Replacements and Reinforcements. At the beginning of each fiscal year, Bonneville shall calculate the AFUDC rate for such fiscal year. Bonneville shall apply such AFUDC rate monthly to the costs in accounts for construction work in progress for Replacements and Reinforcements.

**D. Replacement Costs and Reinforcement Costs - Interest**

Schedule C, line 4, shall reflect the interest cost payable by Seattle pursuant to this Agreement with respect to any Replacement or Reinforcement. Such interest cost for any Replacement or any Reinforcement shall be simple interest calculated at a rate equal to the weighted average interest rate on Bonneville's then outstanding bonds or other debt instruments and such interest shall accrue from the date Bonneville stops accruing AFUDC (approximately the date the work order for such Replacement or such Reinforcement is closed) with respect to such Replacement or such Reinforcement to the due date of the monthly power bill containing the charge for such Replacement or such Reinforcement.

**IV. General Plant Costs**

For each Operating Plan, Bonneville shall adjust, amortize, and allocate Bonneville's total general plant investment (as described below) and Bonneville's Dittmer control equipment investment as set forth in Schedule D, lines 1 through 11, to determine General Plant Cost.

Schedule D, line 1, shall reflect for a fiscal year Bonneville's total cumulative general plant investment. Bonneville's total general plant investment shall include Bonneville's investments in any of the following: land-general plant, structures/improvements-general plant, office furniture and equipment, transportation equipment, stores equipment, tools/shop/garage equipment, laboratory equipment, power operated equipment, communication equipment, miscellaneous equipment (including equipment or apparatus used in Bonneville's utility operations which are not includable in any other general plant investment category), and other similar investment made by Bonneville that is consistent with general plant investment made by utilities in the Western Systems Coordinating Council.

Schedule D, line 2, shall reflect for a fiscal year Bonneville's cumulative investment in Dittmer control equipment.

Schedule D, line 3, shall reflect Bonneville's total general plant investment and Bonneville's Dittmer control equipment investment functionalized to generation using the methodology for functionalizing general plant as set forth in Bonneville's general rate case most recently approved by FERC on an interim basis.

Schedule D, line 4, shall reflect any general plant investment recovered from all Capacity Owners under the CO-94 rate as such general plant investment is unitized by Bonneville; provided, however, for the first two Operating Plans Bonneville shall estimate the amount of the general plant investment included in the Initial Capacity Ownership Price, which estimate shall be reflected in Schedule D, line 4, and Bonneville shall modify such Operating Plans by December 1995, or as soon as practicable thereafter, to reflect in Schedule D, line 4, the actual general plant investment included in the Adjusted Capacity Ownership Price.

Schedule D, line 5, shall reflect any general plant investment recovered from Capacity Owners pursuant to section 5 for Upgrades. The agreements

referred to in subsection 5(d) and subparagraph 5(e)(3)(B) shall specify the portion of costs of an Upgrade that will be considered general plant investment.

Schedule D, line 6, shall reflect Bonneville's adjusted general plant investment functionalized to transmission and shall be calculated by adding line 1 and line 2, and from the sum of line 1 and line 2 subtracting line 3, line 4, and line 5.

Schedule D, line 7, shall reflect Bonneville's annual cost of Bonneville's adjusted general plant investment functionalized to transmission (Schedule D, line 6). Such annual cost shall be the sum of the annual interest and amortization amounts for each category of adjusted general plant investment. The annual interest and amortization amounts for each category shall be calculated by using the investment amounts for each such category, the weighted average interest rate for all Bonneville then outstanding bonds, and the average service lives for each such category from Bonneville's most recent depreciation study. If Bonneville changes its practice of financing general plant investment with bonds, the interest rate used in the calculation referred to in the immediately preceding sentence shall reflect the weighted average interest rate for all of Bonneville's then outstanding debt instruments.

Schedule D, line 8, shall reflect for a fiscal year Bonneville's total cumulative transmission plant-in-service investment (not including general plant investment). Bonneville's total transmission plant-in-service investment shall include Bonneville's investment in any of the following items reflected as total transmission plant-in-service (not including general plant investment) in the Segmentation Study (from Bonneville's general rate case most recently approved by FERC on an interim basis: land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant



investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

Schedule D, line 9, shall be the annual cost ratio of Bonneville's PNW AC Intertie transmission-related general plant derived by dividing Schedule D, line 7, by Schedule D, line 8.

Schedule D, line 10, shall reflect Bonneville's PNW AC Intertie investment. Bonneville's PNW AC Intertie investment shall include Bonneville's investment in any of the following items reflected as Bonneville's PNW AC Intertie plant-in-service in the Segmentation Study from Bonneville's general rate case most recently approved by FERC on an interim basis (or the successor to the Segmentation Study, as determined by Bonneville): land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

**V. Other Costs**

For each Operating Plan, Bonneville shall include Other Costs associated with Bonneville's PNW AC Intertie for a fiscal year. Such Other Costs (Schedule E, line 3) for a fiscal year shall include for such fiscal year any of the following: (1) the costs of operation; maintenance; capital replacements, reinforcements, additions, betterments, renewals; or related costs which Bonneville is obligated to pay pursuant to the Northwest Intertie Agreements or other contracts referred to in subsection 8(b) of this Agreement; and (2) costs paid by Bonneville including monetary judgments, settlements, binding awards, non-contract penalties, contract penalties, liquidated damages, or forfeiture costs, and Bonneville's costs related to such monetary judgments, settlements, binding awards, non-contract penalties, contract penalties,

liquidated damages, or forfeiture costs assessed against or incurred by Bonneville as a facilities owner of, or the operator of, the PNW AC Intertie; provided, however, that Seattle shall not be obligated to pay a share of any such costs that are not properly allocated to Bonneville's PNW AC Intertie.

Bonneville shall forecast its share of operations, maintenance, capital, and related costs for activities that PacifiCorp performs on Bonneville/PacifiCorp jointly-owned PNW AC Intertie facilities based on forecasts received from PacifiCorp or on actual costs for the most recent 12 consecutive month period prior to preparation of an Operating Plan.

## **VI. Contracts and Rates Costs**

### **A. Contracts and Rates Costs - Functionalization Factor**

For each Operating Plan, Bonneville's total contracts and rates direct costs, indirect costs, and overhead costs (Schedule F, lines 5, 6, and 7) shall be adjusted by a contracts and rates functionalization factor (Schedule F, line 3). The contracts and rates functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the contracts and rates functionalization factor shall be the ratio of (a) Bonneville's total transmission-related contracts and rates cost (Schedule F, line 1) over (b) Bonneville's total contracts and rates cost (Schedule F, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Contracts and Rates Cost.

### **B. Contracts and Rates Costs - Allocation Factor**

The allocation factor (Schedule F, line 4) shall be the allocation factor established in Schedule A, line 3.

### **C. Contracts and Rates Costs - Total Contracts and Rates Costs**

Bonneville's total contracts and rates costs for a fiscal year (Schedule F, line 8) shall include Bonneville's expenses (including direct, indirect, and

overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: rate filings with FERC, development of rates customers pay Bonneville for electric power and for wheeling their own power on Bonneville's transmission system; negotiation, administration, and coordination of contracts for power sales, power exchanges, conservation, wheeling and resource services; and analyzing, processing, and issuing all customer power bills; and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule F, line 9, shall reflect Contracts and Rates Cost.

**VII. Power Scheduling Costs**

For each Operating Plan, Bonneville's total power scheduling direct costs, indirect costs, and overhead costs (Schedule G, lines 5, 6, and 7) shall be adjusted by a power scheduling functionalization factor (Schedule G, line 3). The power scheduling functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the power scheduling functionalization factor shall be the ratio of (a) Bonneville's total transmission-related power scheduling cost (Schedule G, line 1) over (b) Bonneville's total power scheduling cost (Schedule G, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Power Scheduling Cost.

**B. Power Scheduling Costs - Allocation Factor**

The allocation factor (Schedule G, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Power Scheduling Costs - Total Power Scheduling Costs**

Bonneville's total power scheduling costs for a fiscal year (Schedule G, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: scheduling and marketing power to Bonneville customers and interconnected utilities, forecasting the hourly power requirements of Bonneville customers and the interchange of power with the region's interconnected electric utilities and with utilities outside the region, scheduling power to be generated at each Federal plant, weather and streamflow forecasting, controlling the reservoirs, implementing the intertie access policy, coordinating power production with the multi-purpose operation of the Federal power system, seasonal load/resource planning, developing current short-term operating plans, short-term marketing of Bonneville's surplus firm power, exchanges, and nonfirm energy, and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule G, line 9, shall reflect Power Scheduling Cost.

**VIII. End of Term Costs**

When all facilities of the PNW AC Intertie are determined, in accordance with Northwest Intertie Agreements, to be no longer operable, Bonneville shall include a forecast of all Bonneville's costs associated with

decommissioning the PNW AC Intertie and credits resulting from such decommissioning in the Operating Plan for each fiscal year that such End of Term Costs are to be incurred. Bonneville's End of Term Costs for a fiscal year (Schedule H, line 4) shall include Bonneville's costs (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: decommissioning, razing structures, disposal of debris, site restoration, meeting all requirements of Federal, state, or local applicable law relating to the foregoing activities, and other decommissioning activities undertaken by Bonneville that are consistent with decommissioning activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

**Seattle's Initial Transaction with California Utility**

Name of parties: (1) Seattle / Pacific Gas & Electric Company  
(2) Seattle / Northern California Power Agency

Term of Contract: (1) March 16, 2003  
(2) March 16, 2013

Date of Execution: (1) March 16, 1993  
(2) March 16, 1993

Amount of Transaction (MW): (1) 100 MW  
(2) 60 MW

**Schedule A for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1		_____	
MFUs of the FCRTS	2		_____	
Allocation factor (Line 1/Line 2)	3		_____	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from rate case	4		_____	
Bonneville's total system operations cost from rate case	5		_____	
Operations functionalization factor (Line 4/Line 5)	6		_____	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	_____	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	_____	_____	_____

	Line No.	Forecast	Actual	Difference
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	_____	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	_____	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	_____	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	_____	_____	_____
<b>F. Operations Cost (Lines 8 + 10 + 12)</b>	13	_____	_____	_____



**Schedule B for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC)</b>				
<b>Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1		_____	
Bonneville's total PSC maintenance cost from rate case	2		_____	
PSC maintenance functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	_____	_____	_____
MFU Allocation Factor (Schedule A, line 3)	5		_____	
PSC direct maintenance cost for Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	_____	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	_____	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	_____	_____	_____

**C. Allocation Factor**

Bonneville's total system maintenance direct cost	9			
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10			

**D. Indirect Cost**

Bonneville's total system maintenance indirect cost	11			
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12			

**E. Overhead Cost**

Bonneville's total system maintenance overhead cost	13			
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14			

**F. Maintenance Cost  
(Lines 8 + 12 + 14)**

15			
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**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>	<b>5</b>	_____	_____	_____

**Notes:**

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.

Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

**Schedule D for FY XXXX**

	Line No.	Allocated Actual
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment	1	_____
Bonneville's Dittmer control equipment investment	2	_____
General plant investment of lines 1 and 2 functionalized to generation	3	_____
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price	4	_____
General plant investment recovered from Capacity Owners for Upgrades	5	_____
Adjusted general plant investment functionalized to transmission (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	_____
BPA total annual cost of Line 6 general plant investment	7	_____
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study	8	_____
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8)	9	_____
Bonneville's PNW AC Intertie investment from Segmentation Study	10	_____
<b>General Plant Cost (Line 9 * Line 10)</b>	11	_____

**Schedule E for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	_____	_____	_____
<b>B. Other PNW AC Interlie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	_____	_____	_____

**Schedule F for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates Costs</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1		_____	
Total contracts and rates cost from rate case	2		_____	
Contracts and rates cost functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4		_____	
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	_____	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	_____	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	_____	_____	_____
<b>D. Contracts and Rates Cost (Line 8 * Line 3 * Line 4)</b>	9	_____	_____	_____

**Schedule G for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VII. Power Scheduling Costs</b>				
<b>A. Power Scheduling Functionalization Factor</b>				
Transmission-related power scheduling costs from rate case	1			
Total power scheduling cost from rate case	2			
Power scheduling cost functionalization factor (Line 1/Line 2)	3			
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4			
<b>C. Total Power Scheduling Costs</b>				
Power scheduling direct costs	5			
Power scheduling indirect costs	6			
Power scheduling overhead costs	7			
Bonneville's total power scheduling costs (Line 5 + Line 6 + Line 7)	8			
<b>D. Power Scheduling Cost (Line 8 * Line 3 * Line 4)</b>	9			

**Schedule H for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	_____	_____	_____
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	(       )	(       )	(       )
<b>D. End of Term Costs</b>				
	4	_____	_____	_____



**FY 2019  
Operating Plan  
EXHIBIT I**

**FY 2019 Operating Plan Summary <sup>1/</sup>**

Schedule	Forecast	
A	\$2,758,593	Operations
B	\$3,446,043	Maintenance
C	\$0	Replacements & Reinforcements
D	\$2,944,600	General Plant
E	\$190,775	Other (PacifiCorp)
F	\$320,654	Contracts & Rates
G	\$370,962	Transmission Scheduling
H	\$0	End of Term
Total	<u>\$10,031,627</u>	Total Forecast for BPA share 3450 MW <sup>2/</sup>

10,031,627 / 3450 MW / 12 Months = \$242.31 /MW-month

Rounded to \$242 for whole-dollar billing

This information is being released externally by BPA on 10/12/17 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Notes:**

<sup>1/</sup> Schedule C amounts are not included in Totals. Schedule C forecasts are presented separately (attached).

<sup>2/</sup> Southern Intertie North to South is 4800 MW; BPA's share is 72% or 3450 MW.

**FY 2019  
Operating Plan**

**Schedule A for FY 2019**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1	81.0		
MFUs of the FCRTS	2	3,574		
Allocation Factor (Line 1/Line 2)	3	2.27%		
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from the BP-18 Rate Case	4	\$87,433,250		
Bonneville's total system operations cost from the BP-18 Rate Case	5	\$87,433,250		
Operations functionalization factor (Line 4/Line 5)	6	100.00%		
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	\$76,709,218		
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	\$1,738,513		
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	\$10,724,032		
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	\$243,046		
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	\$34,285,414		
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	\$777,034		
<b>F. Operations Cost</b> (Line 8 + Line 10 + Line 12)	<b>13</b>	<b>\$2,758,593</b>		

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2019  
Operating Plan**

**Schedule B for FY 2019**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC) Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from the BP-18 Rate Case	1	<u>\$36,857,709</u>	_____	_____
Bonneville's total PSC maintenance cost from the BP-18 Rate Case	2	<u>\$36,857,709</u>	_____	_____
PSC maintenance functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	<u>\$36,857,709</u>	_____	_____
MFU Allocation Factor (Schedule A, Line 3)	5	<u>2.27%</u>	_____	_____
PSC direct maintenance cost Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	<u>\$835,331</u>	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	<u>\$1,485,558</u>	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	<u>\$2,320,889</u>	_____	_____
<b>C. Allocation Factor</b>				
Bonneville's total system maintenance direct cost	9	<u>\$167,008,792</u>	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	<u>1.39%</u>	_____	_____
<b>D. Indirect Cost</b>				
Bonneville's total system maintenance indirect cost	11	<u>\$11,116,270</u>	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	<u>\$154,481</u>	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system maintenance overhead cost	13	<u>\$69,848,616</u>	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	<u>\$970,673</u>	_____	_____
<b>F. Maintenance Cost</b> (Lines 8 + 12 + 14)	<b>15</b>	<b><u>\$3,446,043</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

This information is being released externally by BPA on 10/12/17 as an ad hoc report or analysis generated for a specific purpose. The information provided is based upon data found in Agency Financial Information but may not be found verbatim in an External Standard Financial Report or other Agency Financial Information release.

**Capacity Ownership Agreement  
FY 2019  
Operating Plan  
EXHIBIT I  
Schedule C Table of Contents**

Exhibit I Page 4  
Prepared Date: 10/12/17

<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00297236	Replace Spacer-Dampers (225.3 miles)	Ashe-Marion No. 2	12/28/18	7	ACTIVE
00335885	Land Rights Acquisition for Access Road, Structure 152/2	Ashe-Marion No. 2	11/15/19	8	ACTIVE
00355355	Upgrade Station Service	Chief Joseph Substation	08/31/18	9	ACTIVE
00356244	Replace Analog Transfer Trip Equipment	Fort Rock Compensation Station	01/13/17	10	ACTIVE
00356249	Replace Analog Transfer Trip Equipment for Sycan Bank No. 3	Sycan Compensation Station	03/30/18	11	ACTIVE
00367753	Ground Wire Replacement	John Day-Grizzly No. 1	03/02/20	12	ACTIVE
00381350	Upgrade Engine Generator	Summer Lake Substation	09/15/17	13	ACTIVE
00381451	Replace Three Breakers and a Disconnect Switch	Slatt Substation	09/30/19	14	ACTIVE
00381549	Replace Breaker Failure Relays	Slatt Substation	03/01/19	15	ACTIVE
00381820	Replace Slatt-Buckley and Slatt John Day Risers	Slatt Substation	09/30/19	16	ACTIVE
00384207	Replace Line Relay on Slatt Terminal	Buckley Substation	09/30/19	17	ACTIVE
00416195	SCADA Replacement	Captain Jack Substation	09/27/19	18	ACTIVE
00416257	Replace Overhead Ground Wire	John Day-Grizzly No. 1	03/01/19	19	ACTIVE
00420153	Replace Potential Transformers	Chief Joseph Substation	12/29/17	20	ACTIVE
00423657	Upgrading Grounding Equipment Associated with Sycan Bank No. 1	Sycan Compensation Station	11/01/19	21	ACTIVE
00423664	Replace Disconnect Switches in Sycan Bank No. 1	Sycan Compensation Station	11/01/19	22	ACTIVE
00423702	Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3	Sycan Compensation Station	09/07/18	23	ACTIVE
00432972	SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement	Malin Substation	09/30/18	24	ACTIVE
00439779	Emergency Replacement of Conductor	Ashe-Marion No. 2	01/31/18	25	ACTIVE

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<b>Work Order</b>	<b>Project Short Description</b>	<b>Facility</b>	<b>Estimated Energization Date</b>	<b>Page Number</b>	<b>Work Order Status</b>
00440381	Emergency Replacement of Breaker	Slatt Substation	11/03/17	26	ACTIVE
00441772	Overhead Ground Wire Replacement	John Day-Grizzly No. 2	03/01/19	27	ACTIVE
00449853	Emergency Replacement of Access Road	Ashe-Marion No. 2	01/31/18	28	ACTIVE
TBD Alvey 08	Replace 500 kV Dead Bus Clearing Relays	Alvey Substation	09/30/19	29	Project (BPA)
TBD Alvey 09	Replace Sequential Event Recorder	Alvey Substation	TBD	30	Project (BPA)
TBD Alvey 11	Replace Bank 5 Supervisory Relay	Alvey Substation	09/30/19	31	Project (BPA)
TBD Alvey Dixonville 01	Miscellaneous Right-of-Way Capital Repairs (PAC Project)	Alvey-Dixonville	01/01/20	32	Project (PAC)
TBD Dixonville 04	Replace Series Capacitor Controls	Dixonville Substation	TBD	33	Project (PAC)
TBD Dixonville 05	Regravel Yard	Dixonville Substation	TBD	34	Project (PAC)
TBD Dixonville Meridian 02	Miscellaneous Right of Way Capital Repairs (PAC Project)	Dixonville-Meridian	01/01/20	35	Project (PAC)
TBD Malin 19	Replace Power Circuit Breaker	Malin Substation	TBD	36	Project (PAC)
TBD Meridian 06	Replace 500 kV Series Cap Control (PAC Project)	Meridian Substation	05/01/18	37	Project (PAC)
TBD Sand Spring 02	Station Service Engine Generator Upgrade	Sand Spring Compensation Station	TBD	38	Project (BPA)

Capacity Ownership Agreement  
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NOTE: This page is intentionally left blank; it will be updated when this operating plan is amended.

Work Order	Project Short Description	Facility	Estimated Energization Date	Page Number	Work Order Status

Below is information about work orders added or removed, acronyms and further information.

Work order number(s) added	Date of correspondence	Corresponding Exhibit I, Schedule C Page Number for this Operating Plan

Work order number(s) removed	Date of correspondence	Corresponding Exhibit I, Schedule C page number for this Operating Plan

Key:  
 "ACTIVE" is the status of a work order at start up.  
 "Project (BPA)" or "Project (PAC)" is the pre-ACTIVE status of a work order.

Note 1: This page is intentionally left blank; it will be updated when this operating plan is amended.

Note 2: For administrative simplicity the page numbers for the work orders added into these tables of contents will have the letter "a", etc added as the page number.

**FY 2019 Schedule C**

**Project Work Order:** 00297236  
**Project Short Description:** Replace Spacer-Dampers (225.3 miles)  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.8. Ashe-Marion No. 2, 500 kV Transmission Line  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 12/28/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,748,125				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,374,063				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1,232,581				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$8,354,769				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA adopted the industry standard called Financial Accounting Standard No. 71 (FAS - 71) as of October 1, 2005 for Spacer Damper equipment. This calls for removal of indirect and AFUDC costs from Spacer Damper work orders.
- 5/ For this work order only a portion of the line applies: 99.34 miles for Buckley Marion of the 224 miles Ashe-Marion transmission line which yields 44%. This will be further refined once the project final information is available. Pursuant to Exhibit F of this Capacity Owner Agreement, the costs for this work order are such that the BPA costs are 25% of this work order.

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**FY 2019 Schedule C**

**Project Work Order:** 00335885  
**Project Short Description:** Land Rights Acquisition for Access Road, Structure 152/2  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.8. 500 kV Double Circuit Between Buckley and Marion that Supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 11/15/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,263,220	_____	_____	_____	_____
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$631,610	_____	_____	_____	_____
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$122,087	_____	_____	_____	_____
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4		_____	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,016,917	_____	_____	_____	_____

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Per Exhibit F, Section A.8. above, this work order will be subject to proration, such that 25% of the cost will be applicable to Capacity Owners.

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**FY 2019 Schedule C**

**Project Work Order:** 00355355  
**Project Short Description:** Upgrade Station Service  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 8/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$86,278				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$889,709				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will be prorated to reflect that at Chief Joseph Substation, 1 terminal out of 17 (500 kV) line terminals supports the AC Intertie.

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**FY 2019 Schedule C**

**Project Work Order:** 00356244  
**Project Short Description:** Replace Analog Transfer Trip Equipment  
**Project Facility:** Fort Rock Compensation Station  
**Exhibit F Section:** B.10. Fort Rock 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/13/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$167,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$83,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$16,818				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$267,640				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will likely be subject to proration so that 2/3's of the costs will be applicable to Capacity Owners.

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**FY 2019 Schedule C**

**Project Work Order:** 00356249  
**Project Short Description:** Replace Analog Transfer Trip Equipment for Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.11. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 3/30/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$197,215				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$98,608				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$28,358				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$324,181				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this Schedule C is subject to 65% to determine the BPA costs associated with this work order.

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**FY 2019 Schedule C**

**Project Work Order:** 00367753  
**Project Short Description:** Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** A.2. John Day-Grizzly No. 1 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 3/2/2020  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$535,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$267,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$105,480				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$908,911				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00381350  
**Project Short Description:** Upgrade Engine Generator  
**Project Facility:** Summer Lake Substation  
**Exhibit F Section:** B.12. Summer Lake 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 57%  
**Estimated Energization Date:** 9/15/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$537,086				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$268,543				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$43,362				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$848,991				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00381451  
**Project Short Description:** Replace Three Breakers and a Disconnect Switch  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.1. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** TBD  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,447,843				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$723,922				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$240,328				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,412,093				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while the work order remains in "active" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2019 Schedule C**

**Project Work Order:** 00381549  
**Project Short Description:** Replace Breaker Failure Relays  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.1. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** TBD  
**Estimated Energization Date:** 3/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$59,726				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$29,863				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$89,589				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while the work order remains in "active" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2019 Schedule C**

**Project Work Order:** 00381820  
**Project Short Description:** Replace Slatt-Buckley and Slatt-John Day Risers  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.1. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** TBD  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$93,189				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$46,595				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$139,784				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while the work order remains in "active" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2019 Schedule C**

**Project Work Order:** 00384207  
**Project Short Description:** Replace Line Relay on Slatt Terminal  
**Project Facility:** Buckley Substation  
**Exhibit F Section:** B.3. Buckley 500 kV, Gas Insulated Substation  
**Percent of Project cost applied to PNW AC Intertie:** 57%  
**Estimated Energization Date:** 9/30/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$155,566				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$77,783				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$25,227				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$258,576				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00416195  
**Project Short Description:** SCADA Replacement  
**Project Facility:** Captain Jack Substation  
**Exhibit F Section:** B.14. Captain Jack 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/27/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$339,963				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$169,982				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$42,306				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$552,251				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The BPA ownership share for this equipment is 100%. Please reference Exhibit F, Station General, in Section B.14.

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**FY 2019 Schedule C**

**Project Work Order:** 00416257  
**Project Short Description:** Replace Overhead Ground Wire  
**Project Facility:** John Day-Grizzly No. 1  
**Exhibit F Section:** B.2. John Day 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 3/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$114,112				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$57,056				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$11,880				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$183,048				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00420153  
**Project Short Description:** Replace Potential Transformers  
**Project Facility:** Chief Joseph Substation  
**Exhibit F Section:** B.15. Chief Joseph Substation  
**Percent of Project cost applied to PNW AC Intertie:** TBD  
**Estimated Energization Date:** 12/29/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$244,128				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$122,064				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$13,644				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$379,836				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will be prorated to reflect that at Chief Joseph Substation, 1 terminal out of 11 (230 kV) line terminals supports the AC Intertie.

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**FY 2019 Schedule C**

**Project Work Order:** 00423657  
**Project Short Description:** Upgrading Grounding Equipment Associated with Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.11. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$5,707,621				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,853,811				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$657,021				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$9,218,452				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00423664  
**Project Short Description:** Replace Disconnect Switches in Sycan Bank No. 1  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.11. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 11/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,472,404				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$736,202				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$170,360				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$2,378,966				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00423702  
**Project Short Description:** Replace Station Service Engine Generator and Control Battery at Sycan Bank No. 3  
**Project Facility:** Sycan Compensation Station  
**Exhibit F Section:** B.11. Sycan 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 65%  
**Estimated Energization Date:** 9/7/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$776,647				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$388,324				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$57,364				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)						
	5	\$1,222,334				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This Schedule C, as noted above, is subject to 65% to determine the BPA costs associated with this work order pursuant to Contract No. DE-MS-94BP94332.

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**FY 2019 Schedule C**

**Project Work Order:** 00432972  
**Project Short Description:** SCADA Remote Terminal Unit (RTU) and Serial Event Recorder Replacement  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.13. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** TBD  
**Estimated Energization Date:** 9/30/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$177,893				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$88,947				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$11,707				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$278,546				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while the work order remains in "active" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2019 Schedule C**

**Project Work Order:** 00439779  
**Project Short Description:** Emergency Replacement of Conductor  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.8. Ashe-Marion 500 kV Transmission Line  
**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 1/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$4,258,194				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$2,129,097				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$137,600				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$6,524,891				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Section A.8 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.

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**FY 2019 Schedule C**

**Project Work Order:** 00440381  
**Project Short Description:** Emergency Replacement of Breaker  
**Project Facility:** Slatt Substation  
**Exhibit F Section:** B.1. Slatt 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 50%  
**Estimated Energization Date:** 11/3/2017  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,034,679				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$517,340				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$22,764				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,574,783				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Section B.1 of Exhibit F this Schedule C is 50% applicable to PNW AC Intertie.

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**FY 2019 Schedule C**

**Project Work Order:** 00441772  
**Project Short Description:** Overhead Ground Wire Replacement  
**Project Facility:** John Day-Grizzly No. 2  
**Exhibit F Section:** A.3. John Day-Grizzly No. 2 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 3/1/2019  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$31,664				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$15,832				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,146				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$49,642				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** 00449853  
**Project Short Description:** Emergency Replacement of Access Road  
**Project Facility:** Ashe-Marion No. 2  
**Exhibit F Section:** A.8. 500 kV Double Circuit Between Buckley and Marion that Supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV Circuits

**Percent of Project cost applied to PNW AC Intertie:** 25%  
**Estimated Energization Date:** 1/31/2018  
**Status:** ACTIVE  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$113,090				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$56,545				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$2,266				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	\$171,901				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Section A.8 of Exhibit F this Schedule C is 25% applicable to PNW AC Intertie.

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**FY 2019 Schedule C**

**Project Work Order:** TBD Alvey 08  
**Project Short Description:** Replace 500 kV Dead Bus Clearing Relays  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$25,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	TBD				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	TBD				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	TBD				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.

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**FY 2019 Schedule C**

**Project Work Order:** TBD Alvey 09  
**Project Short Description:** Replace Sequential Event Recorder  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** TBD  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	TBD				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The \$1 listed above is a placeholder representing that there will be a future cost but we do not have enough information yet to provide a forecast.

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**FY 2019 Schedule C**

**Project Work Order:** TBD Alvey 11  
**Project Short Description:** Replace Bank 5 Supervisory Relay  
**Project Facility:** Alvey Substation  
**Exhibit F Section:** B.5. Alvey 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 9/30/2019  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	TBD				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The \$1 listed above is a placeholder representing that there will be a future cost but we do not have enough information yet to provide a forecast.

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**FY 2019 Schedule C**

**Project Work Order:** TBD Alvey Dixonville 01  
**Project Short Description:** Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
**Project Facility:** Alvey-Dixonville  
**Exhibit F Section:** A.11. Alvey-Dixonville 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 1/1/2020  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332, this WO represents BPA's 50% cost share obligation for work performed by PAC.

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**FY 2019 Schedule C**

**Project Work Order:** TBD Dixonville 04  
**Project Short Description:** Replace Series Capacitor Controls  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. BPA/PacifiCorp Dixonville 500 kV Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** TBD  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this work order.
- 5/ These forecasted costs were provided by PacifiCorp on April 28, 2017.

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**Project Work Order:** TBD Dixonville 05  
**Project Short Description:** Regravel Yard  
**Project Facility:** Dixonville Substation  
**Exhibit F Section:** B.6. BPA/PacifiCorp Dixonville 500 kV Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** TBD  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	TBD				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this work order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.
- 5/ The \$1 listed above is a placeholder representing that there will be a future cost but we do not have enough information yet to provide a forecast.

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FY 2019 Schedule C

Project Work Order: TBD Dixonville-Meridian 02  
 Project Short Description: Miscellaneous Right-of-Way Capital Repairs (PAC Project)  
 Project Facility: Dixonville-Meridian  
 Exhibit F Section: A.12. Dixonville-Meridian 500 kV  
 Percent of Project cost applied to PNW AC Intertie: 100%  
 Estimated Energization Date: 1/1/2020  
 Status: Project (PAC)  
 Contract Section 9(b)(2)(B) Date:

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$100,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$100,000				

Notes:

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ BPA owns 50% of the equipment covered by this work order. Therefore, 50% of costs are applicable to Capacity Owners. Please see Contract No. DE-MS79-94BP94332.

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**Project Work Order:** TBD Malin 19  
**Project Short Description:** Replace Power Circuit Breaker  
**Project Facility:** Malin Substation  
**Exhibit F Section:** B.13. Malin 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** TBD  
**Estimated Energization Date:** TBD  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1,046,000				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$1,046,000				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ This work order will likely be subject to proration, so that less than 100 percent of the cost will be applicable to Capacity Owners. However, while the work order remains in "active" status, the analysis is premature. Therefore, this percentage is subject to change.

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**FY 2019 Schedule C**

**Project Work Order:** TBD Meridian 06  
**Project Short Description:** Replace 500 kV Series Cap Control (PAC Project)  
**Project Facility:** Meridian Substation  
**Exhibit F Section:** B.7. BPA/PacifiCorp Meridian 500 kV  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** 5/1/2018  
**Status:** Project (PAC)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$971,500				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$0				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$0				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	\$971,500				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ Pursuant to Contract No. DE-MS-94BP94332 this Schedule C reflects BPA's 50% cost share for this work order.
- 5/ These forecasted costs were provided by PacifiCorp on April 28, 2017.

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**Project Work Order:** TBD Sand Spring 02  
**Project Short Description:** Station Service Engine Generator Upgrade  
**Project Facility:** Sand Spring Compensation Station  
**Exhibit F Section:** B.9. Sand Spring 500 kV Compensation Station  
**Percent of Project cost applied to PNW AC Intertie:** 100%  
**Estimated Energization Date:** TBD  
**Status:** Project (BPA)  
**Contract Section 9(b)(2)(B) Date:**

	Line No.	Forecast	Actual	Less General Plant	Adjusted Actuals	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>						
<b>A. Direct Cost</b>						
Direct Costs of Replacements and Reinforcements	1	\$1				
<b>B. Indirect Cost and Overhead Costs</b>						
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	\$1				
<b>C. AFUDC</b>						
AFUDC of Replacements and Reinforcements	3	\$1				
<b>D. Interest</b>						
Interest Costs of Replacements and Reinforcements (Interest Calculated without plant costs)	4					
<b>E. Total Replacement Costs and Reinforcement Costs</b>						
(Lines 1 + 2 + 3 + 4)	5	TBD				

**Notes:**

- 1/ A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement. The amounts shown above are for the work order; each customer will be billed its pro-rata share of the total adjusted actual.
- 2/ Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).
- 3/ Allowance for Funds Used During Construction (AFUDC) represents the estimated cost of interest on financing the construction of all BPA capital projects or BPA portion of capital projects. In instances where BPA owns a portion of the asset then BPA will only apply AFUDC to its portion of the asset.
- 4/ The \$1 listed above is a placeholder representing that there will be a future cost but we do not have enough information yet to provide a forecast.

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**Schedule D for FY 2019**

	Line No.	Allocated Forecast
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment <i>[From D-1, D-2]</i>	1	<u>1,252,713,271</u>
Bonneville's Dittmer control equipment investment <i>[From D-4A]</i>	2	<u>152,879,860</u>
General plant investment of lines 1 and 2 functionalized to generation <i>[From D-4B]</i>	3	<u>264,824,925</u>
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price <i>[From D-5]</i>	4	<u>1,435,350</u>
General plant investment recovered from Capacity Owners for Upgrades	5	<u>0</u>
Adjusted general plant investment functionalized to transmission <i>[From D-3]</i> (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	<u>1,139,332,856</u>
BPA total annual cost of Line 6 general plant investment <i>[From D-3]</i>	7	<u>60,696,391</u>
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study <i>[From D-6]</i>	8	<u>8,338,048,061</u>
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8 rounded to two decimals)	9	<u>0.73%</u>
Bonneville's PNW AC Intertie investment from Segmentation Study <i>[From D-7, D-8]</i>	10	<u>403,369,886</u>
<b>General Plant Cost</b> (Line 9 * Line 10)	<b>11</b>	<b><u><u>\$2,944,600</u></u></b>

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-1 WORKSHEET

Exhibit I - Page 40  
 Prepared Date 10/12/2017

<u>Description</u>	<u>Investment</u> <sup>1</sup>	<u>Cap Recovery</u> <sup>2</sup>	<u>Amount</u>
Land	879,386	0.0642	56,457
Buildings	<u>260,808,062</u>	0.0178	<u>4,642,384</u>
	<u>261,687,448</u>		<u>4,698,841</u>
M.W./Hydr/Radio/Comm	685,259,026	0.0600	41,115,542
Office Furniture	1,729,500	0.0527	91,145
Data Processing	44,281,929	0.1327	5,876,212
Software	55,736,268	0.1710	9,530,902
Transportation	58,230,345	0.0333	1,939,070
Helicopter	9,234,320	0.0332	306,579
Airplane	8,656,306	0.0630	545,347
Stores Equipment	3,809,093	0.0391	148,936
Tools Shop Garage	13,818,525	0.0410	566,560
Laboratory Equipment	30,648,184	0.0688	2,108,595
Power Operated Equipment	30,259,682	0.0540	1,634,023
Miscellaneous	<u>49,362,645</u>	0.0670	<u>3,307,297</u>
Total General Plant	<b>1,252,713,271</b>	<i>[To Schedule D, Line 1]</i>	<u><u>71,869,049</u></u>

<sup>1</sup> Source: Summary Utility Plant for the period ended 7/31/2017 (Worksheet D-2) from FRP.

<sup>2</sup> Source: Depreciation Study, Calculated Annual Depreciation Accruals Related to Electric Plant at September 30, 2010, pgs III-4 and III-5. This depreciation study was completed February 2012 and was effective March 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-2 WORKSHEET

B/L	FERC ACCT	PEOPLESFT BEG. BALANCE 6/30/2017	ADDITIONS	RETIREMENTS	ADJUSTMENTS	PEOPLESFT ENDING BALANCE 7/31/2017	To D-1	
<b>General Plant</b>							↑	
T	LAND-GENERAL PLANT	3890	879,357	28	0	0		879,386
T	STRUCTURES/IMPROVEMENTS	3900	257,889,458	2,918,604	0	0		260,808,062
T	OFFICE FURNITURE	3911	1,729,500	0	0	0		1,729,500
T	DATA PROCESS EQUIPMENT	3912	44,763,552	0	481,622	0		44,281,929
T	SOFTWARE	3913	56,109,724	6,242	379,697	0		55,736,268
T	ROLLING STOCK	3921	57,997,788	232,557	0	0		58,230,345
T	HELICOPTERS	3922	9,234,320	0	0	0		9,234,320
T	AIRPLANES	3923	8,656,306	0	0	0		8,656,306
T	STORES EQUIPMENT	3930	3,809,093	0	0	0		3,809,093
T	TOOLS/SHOP/GARAGE EQUIP	3940	13,663,436	155,088	0	0		13,818,525
T	LABORATORY EQUIP (PORT)	3950	30,545,552	102,632	0	0		30,648,184
T	POWER OPERATED EQUIP	3960	30,180,060	79,622	0	0		30,259,682
T	COMMUNICATION EQUIP-PORT	3970	683,799,770	2,192,711	733,455	0		685,259,026
T	MISC EQUIP	3980	49,362,645	0	0	0	49,362,645	
<b>Total General Plant</b>				<i>[To Schedule D, Line 1]</i>		1,252,713,271	↓	

Source: Plant and ML Rollforward (FRP J. Guillard)  
 Bonneville Power Administration  
 Summary Utility Plant  
 For the period ended July 31, 2017  
 Peoplesoft Plant Investment

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-3 WORKSHEET

Exhibit I - Page 42  
 Prepared Date 10/12/17

**ADJUSTMENTS TO GENERAL PLANT ANNUAL COST CALCULATION**

Schedule D Adjustments	<u>Investment</u>	<u>Cap Recovery</u>	<u>Amount</u>
additions:			
BPA Dittmer control equip investment (FERC 353)	152,879,860	0.0218	3,332,781
<i>[From D-4A To Schedule D, Line 2]</i>			
subtractions:			
Functionalized to Generation			
<i>[Values from D-4A]</i>			
FERC 353	(152,879,860)	0.0218	(3,332,781)
FERC 390	0	0.0178	0
FERC 391.1	0	0.0527	0
FERC 391.2	(27,993,634)	0.1327	(3,714,755)
FERC 391.3	(21,033,296)	0.1710	(3,596,694)
FERC 392.3	0	0.0630	0
FERC 397	(62,918,135)	0.0600	(3,775,088)
<i>[Equals amount on Schedule D-4A]</i>	<u>(264,824,925)</u>		<u>(14,419,318)</u>
General Plant recovered in CO-94 lump sum payment (Mostly FERC 397)	<u>(1,435,350)</u>	0.0600	<u>(86,121)</u>
<i>[From D-5]</i>			
Total adjustments	(113,380,415)		(11,172,658)
Total General Plant <i>[From D-1, D-2]</i>	<u>1,252,713,271</u>		<u>71,869,049</u>
Schedule D Total General Plant	<u>1,139,332,856</u>		
<i>[Equals amount on Schedule D, Line 6]</i>			
Schedule D annual cost of Adjusted General Plant			<b>60,696,391</b>
		<i>[To Schedule D, Line 7]</i>	

This is based on the depreciation study that was completed February 2012 and was effective March 2012.  
 This is the most recent depreciation study.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-4A WORKSHEET

**ANCILLARY SERVICES  
 PLANT-IN-SERVICE  
 (\$ THOUSANDS)**

Totals by Year	FERC ACCOUNT					2017 TOTAL	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	94,646	27,994	20,735	62,880	206,255	123,670	27,994	20,965	62,909	235,538	152,880	27,994	21,033	62,918	264,825			
Total Plant-in-Service	94,646	27,994	20,735	62,880	206,255	123,670	27,994	20,965	62,909	235,538	152,880	27,994	21,033	62,918	264,825			

**ANCILLARY SERVICES  
 PLANT ADDITIONS <sup>2</sup>  
 (\$ THOUSANDS)**

Additions included in above totals by year	FERC ACCOUNT					2018 TOTAL	FERC ACCOUNT					2019 TOTAL
	353	391.2	391.3	397			353	391.2	391.3	397		
Sched, Syst Control, and Disp Serv <sup>1</sup>	29,024	0	229	29	29,283	29,210	0	68	9	29,287		
Total Additions	29,024	0	229	29	29,283	29,210	0	68	9	29,287		

<sup>1</sup> Equals Bonneville's Dittmer control equipment investment

<sup>2</sup> Totals shown for Additions for each year are already included in the Totals by Year for that year  
 From BP-18 Final Proposal, released publicly in July 2017; M. Gestrin 08/16/2017

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-4B WORKSHEET

**BPA GENERAL PLANT  
 CUMULATIVE PLANT INVESTMENT  
 (\$ THOUSANDS)**

	FERC		2018		ANCILL		2019	
	ACCT	SERV	TRANS	TOTAL	SERV	TRANS	TOTAL	
1 LAND & LAND RIGHTS	389	0	38,109	38,109	0	50,456	50,456	
2 STRUCTURES & IMPROVEMENTS	390	0	372,634	372,634	0	434,662	434,662	
3 OFFICE FURNITURE & FIXTURES	391.1	0	1,245	1,245	0	1,245	1,245	
4 DATA PROCESSING -EQUIPMENT	391.2	27,994	9,851	37,844	27,994	9,851	37,844	
5 DATA PROCESSING -SOFTWARE	391.3	20,965	38,710	59,675	21,033	42,759	63,793	
6 TRANSPORT EQUIPMENT	392.1	0	63,314	63,314	0	67,290	67,290	
7 HELICOPTERS	392.2	0	9,234	9,234	0	9,234	9,234	
8 AIRPLANES	392.3	0	8,656	8,656	0	8,656	8,656	
9 STORES EQUIPMENT	393	0	3,729	3,729	0	3,729	3,729	
10 TOOLS, SHOP & GARAGE EQUIPMENT	394	0	13,423	13,423	0	14,473	14,473	
11 LAB EQUIPMENT	395	0	27,777	27,777	0	27,777	27,777	
12 POWER OPERATED EQUIPMENT	396	0	28,928	28,928	0	28,928	28,928	
13 COMMUNICATIONS EQUIPMENT	397	62,909	626,818	689,727	62,918	664,927	727,846	
14 MISC EQUIPMENT	398	0	46,581	46,581	0	46,581	46,581	
15 SUBTOTAL GENERAL PLANT		111,868	1,289,008	1,400,876	111,945	1,410,568	1,522,513	
16 STATION EQUIPMENT	353	123,670	0	123,670	152,880	0	152,880	
17 <b>TOTAL GENERAL PLANT</b>		<b>235,538</b>	<b>1,289,008</b>	<b>1,524,547</b>	<b>264,825</b>	<b>1,410,568</b>	<b>1,675,393</b>	



[To Schedule D, Line 3]

From BP-18 Final Rate Proposal released publicly July 2017. Provided by M. Gestrin, 08/16/2017

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**Capacity Owners - Actual 08/97  
 BY WORK ORDER**

<u>Budget Item</u>	<u>General Plant</u>		
Alvey (Marion-Alvey Caps) Total	11,104	100%	11,104
Slatt (Loop in - 1 Breaker) Total	0		
Grizzly (7 BPA Breakers) Total	27,859	100%	27,859
Loop into Slatt Total	0		
Malin-Meridian Loop into Captain Jack Total	0		
Alvey-BPA (Includes Marion Sub work) Total	160,294	100%	160,294
Dixonville - PP&L Total	0		
Meridian - PP&L Total	0		
Power System Control - BPA Total	87,010	100%	87,010
Alvey-Spencer - BPA (Land & Pre Engineering only) Total	0		
Spencer-Dixonville - PP&L Total	0		
Dixonville-Meridian - PP&L Total	0		
Captain Jack Breakers Total	839,370	50%	419,685
Captain Jack (Comm & Control) Total	561,390	50%	280,695
Captain Jack (Series Caps) Total	0		
Power System Control & Misc Total	897,405	50%	448,703
Captain Jack-OR/Cal Border Total	0		
	<u>2,584,432</u>		<u>1,435,350</u>

*[To Schedule D, Line 4]*

Note: Per Jim Dowty, these are original amounts and do not change.  
 Source: E. Doyle - 6/12/98

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-6 WORKSHEET

**BONNEVILLE POWER ADMINISTRATION  
 PROJECTED TRANSMISSION PLANT INVESTMENT  
 (\$ THOUSANDS)**

	<b>TOTAL 2017 INVEST</b>	<b>2018 ADDITIONS</b>	<b>TOTAL 2018 INVEST</b>	<b>2019 ADDITIONS</b>	<b>TOTAL 2019 INVEST</b>
GENERATION-INTEGRATION NETWORK	111,354	0	111,354	0	111,354
SOUTHERN INERTIE	6,448,409	230,818	6,679,227	254,644	6,933,871
EASTERN INERTIE	1,048,571	8,979	1,057,549	18,147	1,075,697
UTILITY DELIVERY	123,388	73	123,461	95	123,556
DSI DELIVERY	13,693	0	13,693	0	13,693
REGULATORY ASSET	8,298	0	8,298	0	8,298
INTANGIBLE PLANT	58,402	2,288	60,690	1,331	62,021
ANCILLARY SERVICES	9,559	0	9,559	0	9,559
GENERAL PLANT	206,255	29,283	235,538	29,287	264,825
TOTAL BPA	1,291,550	113,464	1,405,014	128,586	1,533,601
GENERAL PLANT/ANC SERV	9,319,479	384,904	9,704,383	432,091	10,136,474
TOTAL LESS GP/ANC SERV	(1,497,806)		(1,640,553)		(1,798,426)
	7,821,673		8,063,831		8,338,048

*[To Schedule D, Line 8]*

From BP-18 Final Rate Proposal released publicly July 2017. Provided by M. Gestrin, 08/16/2017

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-7 WORKSHEET

Exhibit I - Page 47  
 Prepared Date 10/12/17

**SUBSTATION INVESTMENT (\$)**  
**As of September 30, 2017**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name</u>	<u>Investment</u>
10000019	Alvey <sup>1</sup>	7,684,642
10000060	Buckley <sup>1</sup>	6,512,717
10000121	Chief Joseph <sup>1</sup>	983,516
10000390	John Day <sup>1</sup>	13,352,244
10000477	Marion <sup>1</sup>	3,403,697
10000737	Slatt <sup>1</sup>	4,071,123
10000776	Summer Lake <sup>1</sup>	3,556,234
10000033	Bakeoven	22,847,075
10000162	Captain Jack	42,644,042
10000197	Dixonville	7,837,854
10000269	Fort Rock Caps.	17,434,354
10000314	Grizzly	33,613,850
10000474	Malin	28,988,423
10000499	Meridan (Pacifcorp)	9,354,973
10000656	Round Mountain <sup>2</sup>	65,046
10000713	Sand Spring	18,252,013
10000784	Sycan Cap.	16,203,749
<b>Total</b>	<b>Southern AC Intertie</b>	<b>236,805,552</b>

*[To Schedule D,  
 Line 10 (Add with D-8)]*

Original Source: Materials prepared by BPA Transmission for BP-18 Initial Proposal, based on EOY 2016 asset investment information in coordination with BPA Plant Accounting.

<sup>1</sup> Multi-segment allocation updated per segmentation study analysis as of May 2017.

<sup>2</sup> Metering equipment at Round Mountain added in Fiscal Year 2012.

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CAPACITY OWNERSHIP AGREEMENT  
 FY 2019 OPERATING PLAN  
 SCHEDULE D-8 WORKSHEET

**TRANSMISSION LINE INVESTMENT (\$)**  
**As of September 30, 2017**  
**SOUTHERN AC INTERTIE**

<u>ID #</u>	<u>Name of Substation</u>	<u>Investment</u>
<u>Multi-Segment Lines:</u>		
20000095	Buckley-Grizzly No. 1 @ 57%	9,961,133
20000096	Buckley-Marion No. 1 @ 50%	21,425,547
20000249	Grizzly-Summer Lake No. 1 @ 57% <sup>1</sup>	19,480,851
20000351	Marion-Alvey No. 1 @ 50%	4,456,110
20000372	Coyote Springs-Slatt No. 1 <sup>*</sup>	328,931
20000529	Slatt-John Day No. 1 <sup>*2</sup>	361,130
Total Multi-Segment Lines		56,013,702
20000102	Captain Jack-Malin No. 1	844,154
20000103	Captain Jack-Olinda No. 1	7,393,503
20000248	Grizzly-Captain Jack No. 1 <sup>3</sup>	22,226,974
20000289	John Day-Grizzly No. 1 <sup>4</sup>	12,099,924
20000290	John Day-Grizzly No. 2 <sup>5</sup>	10,521,016
20000615	Alvey-Dixonville No. 1	25,192,398
20000616	Dixonville-Meridian	32,272,663
Total Southern AC Intertie		166,564,334

*[To Schedule D,  
 Line 10 (Add with D-7)]*

Original Source: Materials prepared by BPA Transmission for BP-18 Initial Proposal, based on EOY 2016 asset investment information in coordination with BPA Plant Accounting.

<sup>1</sup> Also includes IDs # 20000911, 20000912 & 20000913 associated with leased costs for Grizzly-Summer Lake No. 1

<sup>2</sup> Also includes IDs # 20000972 & 20000973 associated with leased costs for Slatt-John Day No. 1

<sup>3</sup> Also includes IDs # 20000922 & 20000923 associated with leased costs for Grizzly-Captain Jack No. 1

<sup>4</sup> Also includes IDs # 20000908, 20000909 & 20000910 associated with leased costs for John Day-Grizzly No. 1

<sup>5</sup> Also includes IDs # 20000924, 20000925 & 20000926 associated with leased costs for John Day-Grizzly No. 2

\*The PNW AC Intertie Capacity Ownership Agreement (Exhibit F) provides that the costs of looping the McNary-John Day line into Slatt were to be allocated to the Southern Intertie segment. These costs are now identified as part of the Coyote Springs-Slatt No. 1 and Slatt-John Day No. 1 lines.

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**FY 2019  
Operating Plan**

**Schedule E for FY 2019**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	<u>\$190,775</u>	_____	_____
<b>B. Other PNW AC Intertie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	<u>\$190,775</u>	_____	_____

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**FY 2019  
Operating Plan**

**Schedule F for FY 2019**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from the BP-18 Rate Case	1	<u>\$10,163,077</u>	_____	_____
Total contracts and rates cost from the BP-18 Rate Case	2	<u>\$10,163,077</u>	_____	_____
Contracts and rates cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, Line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	<u>\$10,163,077</u>	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	<u>\$3,985,272</u>	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	<u>\$14,148,349</u>	_____	_____
<b>D. Contracts and Rates Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$320,654</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2019  
Operating Plan**

**Schedule G for FY 2019**

<i>Data taken from the BP-18 Rate Case</i>	Line No.	Forecast	Actual	Difference
<b>VII. Transmission Scheduling Costs</b>				
<b>A. Transmission Scheduling Functionalization Factor</b>				
Transmission scheduling cost from the BP-18 Rate Case	1	<u>\$11,757,597</u>	_____	_____
Total transmission scheduling cost from the BP-18 Rate Case	2	<u>\$11,757,597</u>	_____	_____
Transmission scheduling cost functionalization factor (Line 1/Line 2)	3	<u>100.00%</u>	_____	_____
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4	<u>2.27%</u>	_____	_____
<b>C. Total Transmission Scheduling Costs</b>				
Transmission scheduling direct costs	5	<u>\$7,518,656</u>	_____	_____
Transmission scheduling indirect costs	6	<u>\$4,238,941</u>	_____	_____
Transmission scheduling overhead costs	7	<u>\$4,610,535</u>	_____	_____
Bonneville's total transmission scheduling costs (Line 5 + Line 6 + Line 7)	8	<u>\$16,368,132</u>	_____	_____
<b>D. Transmission Scheduling Cost</b> (Line 8 * Line 3 * Line 4)	<b>9</b>	<b><u>\$370,962</u></b>	_____	_____

**Note:**

Line No. 4 above references 2.27% as the round up for 2.266368%.

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**FY 2019  
Operating Plan**

**Schedule H for FY 2019**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	\$0		
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	\$0		
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	\$0		
<b>D. End of Term Costs</b>	4	\$0		

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**PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT**

executed by the

**UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

acting by and through the

**BONNEVILLE POWER ADMINISTRATION**

and

**PACIFIC NORTHWEST GENERATING COOPERATIVE**

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	Exhibit A (CO-94, AC-93, IS-93 Rate Schedules and General Transmission Rate Schedule Provisions)	
	Exhibit B (Annual Costs Rate)	
	Exhibit C (Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share)	
	Exhibit D (Lump Sum Payment Calculation)	
	Exhibit E (Transmission Loss Factors)	
	Exhibit F (Bonneville's PNW AC Intertie)	
	Exhibit G (Capacity Owners)	
	Exhibit H (Provisions Required by Statute or Executive Order)	
	Exhibit I (Bonneville's PNW AC Intertie Costs)	
	Exhibit J (PNGC's Initial Transaction with California Utility)	

This PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT (Agreement) is entered into as of September 27, 1994, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville or BPA) and the PACIFIC NORTHWEST GENERATING COOPERATIVE (PNGC), an Oregon cooperative corporation. Each of Bonneville and PNGC is sometimes referred to individually in this Agreement as "Party"; Bonneville and PNGC are sometimes referred to together in this Agreement as "Parties."

WITNESSETH:

WHEREAS Bonneville, Portland General Electric Company (Portland), and PacifiCorp Electric Operations (PacifiCorp) planned and constructed improvements and additions to the Northwest portion of the PNW-PSW Intertie; and

WHEREAS such construction was completed in December 1993 resulting in 1600 MW of additional PNW AC Intertie Rated Transfer Capability in a north-to-

south direction and 1225 MW of additional PNW AC Intertie Rated Transfer Capability in a south-to-north direction; and

WHEREAS pursuant to the Northwest Intertie Agreements, Bonneville operates the PNW AC Intertie, in coordination with Portland and PacifiCorp, as a single system so as to maximize PNW AC Intertie Rated Transfer Capability and Operational Transfer Capability consistent with Prudent Utility Practice; and

WHEREAS Bonneville has developed a proposal to offer to PNW non-Federal scheduling utilities and joint agencies capacity ownership rights in 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability; and

WHEREAS such proposal has been studied in Bonneville's Final Non-Federal Participation Environmental Impact Statement, dated January 1994, and was the selected alternative in the Administrator's Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville and PNGC executed a Memorandum of Understanding, DE-MS79-92BP93488, dated October 11, 1991, which, among other things, sets forth the principles for PNGC's capacity ownership rights in Bonneville's PNW AC Intertie; and

WHEREAS interest expressed in capacity ownership by PNW non-Federal scheduling utilities and joint agencies exceeded the 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability offered by Bonneville, and as a result Bonneville developed and applied an allocation methodology selected in the Administrator's Capacity Ownership Record of Decision, dated March 25, 1994; and

WHEREAS concurrent with the execution of this Agreement, Bonneville and PNGC are executing Contract No. DE-MS79-94BP94151 to provide PNGC with, among other things, network wheeling between the John Day Substation and PNGC's transmission system; and

WHEREAS Bonneville is authorized pursuant to law to dispose of electric power generated at various Federal hydroelectric projects in the PNW, or acquired from other resources, to construct and operate transmission facilities, to provide

transmission and other services, and to enter into agreements to carry out such authority;

NOW, THEREFORE, Bonneville and PNGC agree as follows:

1. **DEFINITIONS**

- (a) "Adjusted Capacity Ownership Price" means the price calculated pursuant to column 2, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (b) "Adjusted Lump Sum Payment" means the Adjusted Capacity Ownership Price multiplied by PNGC's Capacity Ownership Share (in kilowatts), as described with more particularity in section D of Exhibit D.
- (c) "Allocated Direct Costs" means for each fiscal year the Operations Cost as allocated to Bonneville's PNW AC Intertie in accordance with section I.C of Exhibit I for such fiscal year. Allocated Direct Costs are not included in Direct Costs, Indirect Costs, or Overhead Costs.
- (d) "Allowance for Funds Used During Construction" or "AFUDC" constitutes interest on the funds used for utility plant under construction. The AFUDC rate approximates the cost of money being used to finance current construction work in progress and is calculated in accordance with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors. AFUDC shall be capitalized in accordance with Bonneville's accounting procedures and practices, and in any event consistent with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors.
- (e) "Billing Provisions" means those provisions set forth in Exhibit B, Part B.



- (f) "Bonneville's PNW AC Intertie" means facilities of the PNW AC Intertie owned partially or entirely by Bonneville specified in Exhibit F together with the equipment and facilities installed in or connected to such facilities specified in Exhibit F, to the extent such facilities are necessary for the transmission of power on the PNW AC Intertie.
- (g) "Bonneville's PNW AC Intertie Operational Transfer Capability" means Bonneville's PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and by operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (h) "Bonneville's PNW AC Intertie Rated Transfer Capability" means Bonneville's share of the PNW AC Intertie Rated Transfer Capability as determined in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (i) "Capacity Owner" means each of the parties listed in Exhibit G to the extent that such party has entered into a Capacity Ownership Agreement.
- (j) "Capacity Ownership Agreement" means, in the singular, this Agreement or the agreement, substantially identical to this Agreement, entered into by each Capacity Owner (other than PNGC) and Bonneville, and in the plural, this Agreement and all such substantially identical agreements entered into respectively by

Capacity Owners (other than PNGC) and Bonneville, as each such agreement may be amended or supplemented from time to time pursuant to the terms of such agreement, concerning (among other things) the rights of such Capacity Owner with respect to the PNW AC Intertie.

- (k) "Capacity Ownership Percentage" means, as of the Effective Date, in the singular, the percentage of Bonneville's PNW AC Intertie Rated Transfer Capability owned by PNGC pursuant to this Agreement, which percentage is determined by dividing PNGC's Capacity Ownership Share as of the Effective Date by Bonneville's PNW AC Intertie Rated Transfer Capability as of the Effective Date (such percentage being subject to change pursuant to the terms of this Agreement), and in the plural, the percentages of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which percentages are set forth in Exhibit G (each of such percentages being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (l) "Capacity Ownership Rights" means the rights of PNGC pursuant to this Agreement.
- (m) "Capacity Ownership Share" means, except as such term is otherwise used in sections III.A and III.B of the CO-94 rate set forth in Exhibit A on the Effective Date, in the singular, the MW amount of Bonneville's PNW AC Intertie Rated Transfer Capability owned by PNGC pursuant to this Agreement, which MW amount is set forth in Exhibit C (such amount being subject to change pursuant to the terms of this Agreement), and in the plural, the MW amounts of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which amounts are set forth in Exhibit G (each of such amounts being subject to

change pursuant to the respective terms of such Capacity Ownership Agreements).

- (n) "Committee" has the meaning set forth in subsection 12(a).
- (o) "Contracts and Rates Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville's total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville's PNW AC Intertie.
- (p) "Direct Costs" means any costs incurred by Bonneville which are readily identifiable, or obviously traceable to, and directly benefit, a specific Bonneville program, project, or other cost objective. Direct Costs are not included in Allocated Direct Costs, Overhead Costs, or Indirect Costs. The methods for determining Direct Costs for Bonneville's PNW AC Intertie are set forth in sections II.B and III.A of Exhibit I.
- (q) "Effective Date" means the date as of which this Agreement becomes effective pursuant to section 2.
- (r) "End of Term Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.
- (s) "FERC" means the Federal Energy Regulatory Commission or its regulatory successor.
- (t) "General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The

method for determining General Plant Cost is set forth in section IV of Exhibit I.

- (u) "GTRSP" or "GTRSPs" means Bonneville's General Transmission Rate Schedule Provisions, set forth in Exhibit A, as such provisions may be revised from time to time.
- (v) "Indirect Costs" means any costs incurred by Bonneville which indirectly benefit and are directly charged to a specific Bonneville program, project, or other cost objective for which a Direct Cost or Allocated Direct Cost is charged. Indirect Costs shall not be included in Allocated Direct Costs, Direct Costs, or Overhead Costs. The methods for determining Indirect Costs for Bonneville's PNW AC Intertie are set forth in sections I.D, II.D, and III.B of Exhibit I.
- (w) "Initial Capacity Ownership Price" means \$215 per kilowatt, the calculation of which charge is set forth in column 1, section B of Exhibit D and in section III.A of the CO-94 rate in Exhibit A.
- (x) "Initial Lump Sum Payment" means the Initial Capacity Ownership Price multiplied by PNGC's Capacity Ownership Share (in kilowatts), as described with more particularity in section C of Exhibit D.
- (y) "Interconnection Agreement" means the "Interim Interconnection Agreement Between Certain California-Oregon Transmission Project Participants and Northwest Participants," Contract No. DE-MS79-91BP93158, as amended or superseded.
- (z) "Joint AC Intertie" is as defined in the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (aa) "Joint Intertie Scheduling Office" or "JISO" means the group of Bonneville, Portland, and PacifiCorp schedulers, which, among other things, accepts PNW-PSW Intertie Preschedules.

- (bb) "Maintenance Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville's PNW AC Intertie, maintenance Indirect Costs for Bonneville's PNW AC Intertie, and maintenance Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.
- (cc) "MW" means megawatt.
- (dd) "Northwest Intertie Agreements" means the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (ee) "Operating Plan" means, subject to subsection 13(o), with respect to any fiscal year commencing on or after the day on which the annual costs rate set forth in Exhibit B has been approved on an interim or final basis by FERC, the written document containing the information described in subsection 13(c), as such document may be amended pursuant to section 13, 14, or 16.
- (ff) "Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.
- (gg) "Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

- (hh) "Overhead Cost" means administrative and general costs, support service costs, or other costs similar in nature which are distributed or allocated by Bonneville to Bonneville's PNW AC Intertie. Overhead Costs are not included in Direct Costs, Allocated Direct Costs, or Indirect Costs. The methods for determining Overhead Costs are set forth in sections I.E, II.E, and III.B of Exhibit I.
- (ii) "Pacific Northwest" or "PNW" means the area defined as the Pacific Northwest in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. section 839a(14).
- (jj) "Pacific Time" means Pacific Standard Time and Pacific Daylight Time as each is in force.
- (kk) "PNW AC Intertie" means facilities including, but not limited to, the following: two 500 kV transmission lines extending from John Day Substation to the Malin Substation and to the California-Oregon border; portions of John Day, Grizzly, and Malin Substations and the Sand Springs, Fort Rock, and Sycan Compensation Stations; a portion of the Buckley-Summer Lake 500 kV transmission line and associated substations; portions of the Buckley-Marion and Marion-Alvey 500 kV transmission lines and associated facilities; a portion of Bonneville's capacity rights in the Summer Lake-Malin 500 kV transmission line; Bonneville's rights in the Meridian-Malin 500 kV transmission line and Bonneville's share of ownership of the Alvey-Meridian 500 kV transmission line; Captain Jack Substation; the 500 kV transmission line from Captain Jack Substation to the California-Oregon border; and any modifications, additions, improvements, or other alterations thereto.
- (ll) "PNW AC Intertie Operational Transfer Capability" means the PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with

the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.

- (mm) "PNW AC Intertie Rated Transfer Capability" means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.
- (nn) "Pacific Northwest-Pacific Southwest Intertie" or "PNW-PSW Intertie" means the DC transmission line between the Celilo Converter Station in The Dalles, Oregon, and the Sylmar Converter Station near Los Angeles, California, the PNW AC Intertie, and the AC Intertie in California including, without limitation, the California-Oregon Transmission Project.
- (oo) "Pacific Northwest Non-Federal Utility" means any electric utility that serves retail load in the region consisting of (1) the states of Oregon, Washington, and Idaho, the portion of the state of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River Basin drainage basin, and (2) any contiguous areas, not in excess of seventy-five air miles from the area referred to in (1) above, which areas are a part of the service area of a rural electric cooperative power customer served by Bonneville on the effective date of the Pacific Northwest Power Planning and Conservation Act (P.L. 96-501) having a distribution system from which it serves both within and without such region.
- (pp) "Power Scheduling Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit

I to determine Power Scheduling Costs for Bonneville's PNW AC Intertie.

- (qq) "Preschedule" means the schedule submitted by PNGC to the JISO pursuant to paragraph 4(b)(1) for transactions prepared each Working Day for the period beginning 2400 hours of the current Working Day through 2400 hours of the next Working Day.
- (rr) "Prudent Utility Practice" means, at any particular time, the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto that would achieve the desired result or, if there are no such practices, methods, and acts, the practices, methods, and acts which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to achieve the desired result consistent with reliability and safety.
- (ss) "Real-time Schedule" means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed by the JISO to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by PNGC.
- (tt) "Reinforcement" means any transmission plant modification, addition, improvement, or other alteration to the Federal Columbia River Transmission System which is not a Replacement or an Upgrade and which is made pursuant to subsection 7(c).
- (uu) "Reinforcement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to PNGC for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on



account of such Reinforcement. Reinforcement Costs do not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

- (vv) "Replacement" means for any transmission plant addition, betterment, renewal and equipment or facility that takes the place of or adds to any existing equipment or facility on Bonneville's PNW AC Intertie that does not increase Bonneville's PNW AC Intertie Rated Transfer Capability.
- (ww) "Replacement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to PNGC for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Replacement. General Plant Cost is not included in Replacement Costs. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.
- (xx) "Revised Adjusted Capacity Ownership Price" means a price calculated pursuant to column 3, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (yy) "Revised Adjusted Lump Sum Payment" means a Revised Adjusted Capacity Ownership Price multiplied by PNGC's Capacity Ownership Share (in kilowatts), as described with more particularity in section E of Exhibit D.
- (zz) "Scheduler" means the person authorized by a Party to accept or submit schedules pursuant to section 4 and authorized to implement,

interpret, and vary the scheduling procedures set forth in such section pursuant to this Agreement.

- (aaa) "Scheduling Percentage" means the percentage of the PNW AC Intertie Rated Transfer Capability owned by PNGC pursuant to this Agreement, which percentage is determined by dividing PNGC's Capacity Ownership Share by the PNW AC Intertie Rated Transfer Capability.
- (bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of PNGC's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour.
- (ccc) "Scheduling Utility" means either (i) a Pacific Northwest Non-Federal Utility that serves a retail service area and operates a generation control area, or (ii) a Pacific Northwest Non-Federal Utility designated by Bonneville as a "computed requirements customer" or its equivalent.
- (ddd) "Term" means the period of effectiveness of this Agreement set forth in subsection 2(a).
- (eee) "Third AC Intertie" means the Third AC Intertie Project, which project increased the PNW AC Intertie Rated Transfer Capability by 1600 MW in a north-to-south direction and by 1225 MW in a south-to-north direction.
- (fff) "Third AC Intertie Project" means the Third AC Intertie System Reinforcement and the construction of the Alvey-Meridian 500 kV transmission line and of facilities related to such transmission line during the period from July 1984 through December 1993.
- (ggg) "Third AC Intertie System Reinforcement" means the improvements, additions and modifications to the PNW AC Intertie constructed during the period from July 1984 through December 1993 plus the construction of the Captain Jack substation and of facilities related to

such substation during the period from July 1984 through December 1993.

- (hhh) "Upgrade" means any MW increase to Bonneville's PNW AC Intertie Rated Transfer Capability which arises from or is related to an increase to the PNW AC Intertie Rated Transfer Capability.
- (iii) "Working Day" means any day other than Saturday, Sunday, and a legal holiday recognized by the Federal government or PNGC.

## **2. TERM AND TERMINATION**

- (a) This Agreement shall become effective as of the later of (1) the date of execution and delivery of this Agreement by both of the Parties, and (2) the date by which this Agreement has, with respect to PNGC, been approved by the Rural Electrification Administration (REA). To the extent required to do so by REA, PNGC shall submit this Agreement to REA for approval no later than three Working Days after the date on which this Agreement is executed by both Parties. Bonneville shall provide PNGC with a copy of the executed Agreement on the next Working Day after Bonneville executes the Agreement. PNGC shall use best efforts to obtain from REA on the earliest possible date REA's permission that this Agreement become effective in accordance with subsection 2(a). This Agreement shall continue in effect so long as any facilities of the PNW AC Intertie are in existence and operable, unless otherwise earlier terminated by written agreement of both of the Parties or unless terminated pursuant to the terms of this Agreement. All liabilities incurred under this Agreement shall be preserved until satisfied.
- (b) Notwithstanding subsection 2(a), no Capacity Ownership Rights may be exercised by PNGC until payment is made by PNGC pursuant to paragraph 9(a)(1) and received by Bonneville.
- (c) If Bonneville does not receive the payment from PNGC pursuant to paragraph 9(a)(1), then Bonneville shall have the option to terminate

this Agreement by delivering to PNGC written notice of such termination.

- (d) Notwithstanding subsection 2(a), if Bonneville incurs End of Term Costs, the following provisions of this Agreement, and all rights and obligations thereunder, shall continue in full force and effect until Bonneville renders its final bill to PNGC pursuant to subsection 9(b), unless this Agreement is earlier terminated by mutual agreement of the Parties: subsections 2(b), 2(c), and 2(d), sections 1, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, and 23, and Exhibits A, B, C, D, F, G, H, and I. All liabilities incurred under such provisions of this Agreement shall be preserved until satisfied.
- (e) If this Agreement has not become effective pursuant to subsection 2(a) within 12 months following the date upon which Bonneville executes and delivers this Agreement to PNGC, this Agreement shall be void ab initio and of no force or effect.

### 3. **CAPACITY RIGHTS**

- (a) **Purchase and Sale of Capacity**

Pursuant to the terms and conditions of this Agreement, PNGC purchases from Bonneville and Bonneville sells to PNGC the Capacity Ownership Rights.

- (b) **Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, PNGC shall notify Bonneville in writing of PNGC's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and PNGC shall have the right to utilize its Scheduling Share pursuant to the paragraph PNGC elects. Prior to Bonneville's receipt of such notification, PNGC shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If PNGC fails to make an election within the

prescribed time period, PNGC shall be deemed to have elected the option set forth in paragraph 3(b)(1).

**(1) No Third Party Wheeling**

**(A) Except as expressly provided in subparagraph 3(b)(1)(B), PNGC shall not use its Scheduling Share to transmit power or energy (except for inadvertent power flows) that PNGC does not own at the California-Oregon border or for which transmission PNGC receives any revenue that would be reportable in PNGC's accounting system where revenues received for wheeling for other entities would be booked.**

**(B) If PNGC's Scheduling Share is not fully utilized by PNGC in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions over the unused portion of PNGC's Scheduling Share for such hour but no longer than such hour. PNGC shall be compensated for such wheeling solely by the payments as described in sections 3(b)(1)(B)(i) and (ii) below. For purposes of this subparagraph 3(b)(1)(B), PNGC's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that PNGC has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour on any MW amount of PNGC's Scheduling Share. In return for PNGC's Scheduling Share being made available to Bonneville pursuant to this subparagraph 3(b)(1)(B), Bonneville shall pay PNGC**

**(i) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a north-to-**

south direction under the IS-93 rate, section II.A, or its successor to other entities in such hour, and (2) the ratio of PNGC's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour, and

- (ii) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a south-to-north direction under the IS-93 rate, section II.A or its successor to other entities in such hour, and (2) the ratio of PNGC's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour; provided, however, that Bonneville shall not be required to make payments for such south-to-north wheeling pursuant to this section 3(b)(1)(B)(ii) earlier than two years after the Effective Date.

Bonneville shall make payments pursuant to this subparagraph 3(b)(1)(B) in accordance with paragraph 9(f)(1).

- (C) During an outage resulting from maintenance activities on the PNW AC Intertie performed by Bonneville other than maintenance activities undertaken due to emergencies or uncontrollable forces, the following shall apply:
  - (i) When PNGC's Scheduling Share for any given hour is reduced as a consequence of such outage which reduces in Bonneville's PNW AC Intertie

Operational Transfer Capability such that PNGC's Scheduling Share for such hour is less than the MW amount of the aggregate of PNGC's net firm transactions identified by PNGC to Bonneville pursuant to section 3(b)(1)(C)(iv) for such hour, Bonneville shall, subject only to sections 3(b)(1)(C)(ii) and (iii) and to the immediately succeeding sentence, wheel on a firm basis that portion of PNGC's firm transactions that equals the difference between PNGC's Scheduling Share for such hour and the MW amount of the aggregate of PNGC's firm transactions for such hour up to, but not in excess of, PNGC's Capacity Ownership Share. Notwithstanding the foregoing, Bonneville shall only be obligated to provide such wheeling to the extent that each party with whom PNGC is conducting such firm transactions has received a sufficient AC Intertie capacity allocation in California to accommodate such transactions. PNGC shall pay the IS-93 rate, section II.A, or its successor for such wheeling pursuant to this section 3(b)(1)(C)(i) in accordance with subsection 9(d).

- (ii) Bonneville shall not be obligated to provide such wheeling to PNGC pursuant to section 3(b)(1)(C)(i) if no PNW AC Intertie Operational Transfer Capability is available to Bonneville after Bonneville has scheduled all of Bonneville's Firm Schedules. For purposes of this section, "Bonneville's Firm Schedules" shall mean schedules for assured delivery or other firm transmission contracts pursuant to the Long-Term Intertie Access Policy, as revised or amended, or its successor, and schedules for

Bonneville's firm power and energy sales and exchange transactions.

(iii) Bonneville shall not be obligated to provide such wheeling to PNGC pursuant to section 3(b)(1)(C)(i) until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to PNGC or until October 1, 1994, whichever occurs sooner.

(iv) No later than ten Working Days prior to the first day of deliveries under a firm transaction, PNGC shall identify such firm transaction to Bonneville. PNGC shall identify such firm transaction to Bonneville by providing to Bonneville a copy of PNGC's contract for such firm transaction (after information considered proprietary by PNGC has been redacted by PNGC). Bonneville shall review such contract to verify that the transaction is firm. If PNGC and its contractor represent or state in writing that the transaction set forth in their contract is firm, Bonneville shall accept that written representation or statement as dispositive of the question of whether such transaction is firm. Implementation of such procedures in this section 3(b)(1)(C)(iv) may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written.

(D) PNGC retains any and all rights of access which it would otherwise have to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor.



**(2) Third Party Wheeling**

- (A) PNGC may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by PNGC. PNGC shall have no obligation under this Agreement to make available to Bonneville any portion of PNGC's Scheduling Share which is unused in any hour, and Bonneville shall not schedule over PNGC's Scheduling Share without PNGC's prior consent.
- (B) PNGC hereby waives any and all rights of access to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor; provided, however, that Bonneville may, at its option, provide PNGC with access to Bonneville's PNW-PSW Intertie pursuant to any provision of the Long-Term Intertie Access Policy, as revised or amended, or its successor.
- (C) PNGC shall provide Bonneville with the information set forth in sections 3(b)(2)(C)(i) through 3(b)(2)(C)(iii) when PNGC uses its Scheduling Share to export from the Pacific Northwest energy or power received from third parties. Such exports of energy or power on a real-time basis or for durations of less than four months are excluded from this obligation. For exports of four months or longer duration made on behalf of third parties pursuant to paragraph 3(b)(2), such information shall include:
- (i) the name and business address of the third party;
  - (ii) the amount of power or energy and the duration of the transaction; and

- (iii) the name of the recipient or purchaser of such power.

Any additional information needed by Bonneville will be obtained from such third party.

#### 4. SCHEDULING

- (a) PNGC (and only PNGC) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to PNGC's Scheduling Share for such hour. The MW amount of PNGC's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of PNGC's north-to-south schedules and south-to-north schedules (net schedules) for such hour.
- (b) PNGC shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1) and 4(b)(2). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours referenced in paragraphs 4(b)(1) and 4(b)(2) are Pacific Time.

##### (1) Preschedules

- (A) Bonneville shall make available to PNGC on each Working Day as soon as practicable after 0800 hours information regarding the PNW AC Intertie Operational Transfer Capability with respect to Preschedules. In the event an emergency or uncontrollable force causes a change in the PNW AC Intertie Operational Transfer Capability, Bonneville shall notify PNGC of such change as soon as practicable.
- (B) If Long-Term Intertie Access Policy Condition 1 Formula Allocation Procedures or their successor

(Condition 1) are expected by Bonneville to become effective, Bonneville shall so notify PNGC no later than 0930 hours on the Working Day prior to the day on which Condition 1 is expected to become effective. Bonneville shall notify PNGC no later than 0930 hours on the Working Day prior to the day on which Condition 1 ceases to be in effect.

- (C) PNGC shall submit its Preschedule to the Joint Intertie Scheduling Office no later than 1000 hours on each Working Day if Condition 1 is in effect. If Condition 1 is not in effect, PNGC shall submit its Preschedule to the JISO no later than 1430 hours on each Working Day.

**(2) Real-time Scheduling**

- (A) Real-time Schedules shall be arranged through Bonneville's real-time scheduling office. Bonneville's real-time Scheduler shall make reasonable efforts to receive Real-time Schedules; provided, however, that Bonneville's real-time Scheduler may, but is not required to, accept Real-time Schedules between 1500 and 2200 hours on the Working Day preceding the day for which such Real-time Schedule is submitted.
- (B) Real-time Schedules shall be arranged for a full hour. Arrangements shall be completed no later than 30 minutes prior to that hour.
- (C) PNGC shall use best efforts to keep schedule changes to a minimum; provided, however, that for purposes of this subparagraph 4(b)(2)(C), "best efforts" shall not be deemed to refer to efforts made regardless of their economic effect.

- (D) The requirements set forth in subparagraphs 4(b)(2)(B) and 4(b)(2)(C) do not preclude schedule changes at other times as may be deemed necessary by any control area operators or other entities involved in effectuating such schedule changes. Such control area operators and other entities shall be notified by Bonneville of such schedule changes as soon as practicable in accordance with Prudent Utility Practice for purposes of coordinating ramps and proper accounting. Such schedule changes shall be deemed to occur at mid-ramp. The mid-ramp time and the integrated value for the hour shall be subject to the mutual agreement by such control area operators and other entities.
  - (E) Subject to compliance with subparagraphs 4(b)(2)(A) through 4(b)(2)(D) and with other applicable PNW AC Intertie scheduling practices then in effect, Bonneville shall make PNGC's schedule change.
- (c) Bonneville shall make deliveries of power or energy to the California-Oregon border or the John Day Substation, as appropriate, pursuant to schedules submitted in accordance with this section 4; provided, however, that Bonneville shall not be required to make such deliveries in an hour to the extent that PNGC's schedule exceeds PNGC's Scheduling Share for such hour, except as may be expressly provided pursuant to subparagraph 3(b)(1)(C).

## **5. UPGRADES**

- (a) Bonneville shall consult with the Committee one time each year regarding any plans for Upgrades.
- (b) Prior to the completion of an Upgrade, Bonneville shall provide to PNGC information in writing regarding estimated costs and the MW amount of such Upgrade, to the extent that such information is available to Bonneville.

- (c) As soon as practicable following the completion of an Upgrade, Bonneville shall notify PNGC in writing of the following: (1) the MW amount of such Upgrade; (2) the capital and related costs (less any amount of such costs collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, to Bonneville for completing or implementing such Upgrade; and (3) calculations of (A) PNGC's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade and (B) PNGC's Capacity Ownership Percentage multiplied by the capital and related costs, if any, to Bonneville for completing or implementing such Upgrade. PNGC may elect to acquire a share of such Upgrade in an amount up to PNGC's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade. Within 100 days from receipt of such written notice from Bonneville, PNGC shall notify Bonneville in writing of PNGC's decision regarding such acquisition. If PNGC elects to acquire, pursuant to this subsection 5(c), a portion of such Upgrade, PNGC's notice to Bonneville shall include the percentage of such Upgrade that PNGC elects to acquire (Acquisition Percentage). If PNGC fails to notify Bonneville within such 100-day period, PNGC shall be deemed to have elected not to acquire any of such Upgrade.
- (d) If PNGC elects to acquire a portion of an Upgrade pursuant to subsection 5(c), the cost to PNGC shall be PNGC's Acquisition Percentage multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such cost collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, incurred by Bonneville for completing or implementing such Upgrade. PNGC shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (e) If PNGC's Acquisition Percentage with respect to an Upgrade equals its Capacity Ownership Percentage and the Acquisition Percentage of any other Capacity Owner with respect to such Upgrade is less than its Capacity Ownership Percentage, then the following shall apply:

(1) Bonneville shall, in a timely manner, provide written notice simultaneously to PNGC and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage) of the MW amount equal to 100 percent of that portion of an Upgrade offered to, but not acquired by, the Capacity Owners pursuant to subsection 5(c) (Unacquired Share). If PNGC and each of such other Capacity Owners have agreed in writing to an apportionment as among themselves of the Unacquired Share (Apportionment), PNGC may, within 45 days following receipt of such written notice from Bonneville, by written notice request Bonneville to offer in writing to PNGC such portion of the Unacquired Share as has been apportioned to PNGC pursuant to the Apportionment, and Bonneville shall offer to PNGC such portion of the Unacquired Share.

(2) If Bonneville does not receive from PNGC and from each Capacity Owner referred to in paragraph 5(e)(1) the requests for offer pursuant to paragraph 5(e)(1) within the 45-day period specified in such paragraph, Bonneville shall, in a timely manner, offer in writing simultaneously to PNGC and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage), respectively, a portion of an Upgrade offered to, but not acquired by, the other Capacity Owners pursuant to paragraph 5(e)(1) (Second Unacquired Share) up to the "Additional Share Offered" determined as follows:

$$\text{Additional Share Offered} = (A + B) \times C$$

where: A = PNGC's Capacity Ownership Percentage.

B = Percentage equal to the sum of Capacity Ownership Percentages of Capacity Owners that acquired respectively an Acquisition Percentage equal to their Capacity Ownership Percentage.

C = Second Unacquired Share.

- (3) Within 30 days following PNGC's receipt of Bonneville's written offer pursuant to paragraph 5(e)(2), PNGC shall notify Bonneville in writing of PNGC's decision regarding acquisition of the Additional Share Offered. If PNGC fails to notify Bonneville within such 30-day period, PNGC shall be deemed to have elected not to acquire any of the Additional Share Offered. If PNGC elects pursuant to this paragraph 5(e)(3) to acquire any or all of the Additional Share Offered, then:
- (A) PNGC shall include in its notice to Bonneville pursuant to this paragraph 5(e)(3) such share (Additional Share Acquired) of the Additional Share Offered as PNGC elects to acquire pursuant to this paragraph 5(e)(3), and
  - (B) the cost to PNGC with respect to such acquisition shall be equal to the proportion of the Additional Share Acquired to such Upgrade multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such costs collected by Bonneville through charges other than payments by PNGC pursuant to subsection 5(d) or subparagraph 5(e)(3)(B)), if any, to Bonneville for completing or implementing such Upgrade. PNGC shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (f) All capacity offered but not acquired pursuant to subsections 5(c) and (e) shall for purposes of this Agreement remain with Bonneville.
- (g) After PNGC has either accepted or declined all offers of capacity by Bonneville pursuant to subsections 5(c) and (e), PNGC's Capacity Ownership Share, Capacity Ownership Percentage, and Scheduling Percentage in Exhibit C shall be revised to reflect changes resulting from PNGC's elections pursuant to subsections 5(c) and (e). Revision

of Exhibit C shall be pursuant to subsection 19(d). Exhibit G shall be revised accordingly pursuant to subsection 19(i).

## **6. SALE OR ASSIGNMENT**

- (a) This Agreement or any interest herein shall not be transferred, sold, alienated, or assigned by PNGC to any person without Bonneville's prior and express written consent. Such consent shall not be unreasonably withheld. In determining whether to grant its consent under this subsection 6(a), Bonneville shall take into consideration information including, but not limited to, whether the person or entity to whom this Agreement or any interest therein is proposed to be transferred, sold, alienated, or assigned is a person or entity entitled to request and receive transmission services pursuant to section 211 of the Federal Power Act, whether such person or entity can either provide its own scheduling services or has contracted with another entity to provide such scheduling services, whether such person or entity has the financial capability to meet the payment obligations under this Agreement, and whether the person or entity is either electrically interconnected to Bonneville's transmission system or has contractual arrangements for wheeling with others who are electrically interconnected to Bonneville's transmission system. This Agreement shall inure to the benefit of and be binding upon the Parties, their respective legal representatives, permitted assigns, and successors in interest. Any transfer, sale, alienation, or assignment made by PNGC in violation of this section 6 shall be void ab initio and without any force or effect whatsoever.
- (b) Bonneville hereby consents to the transfer, sale, alienation, or assignment by PNGC to any other Capacity Owner of all or part of its Capacity Ownership Share and all of PNGC's rights and obligations pursuant to this Agreement with respect thereto. Bonneville hereby further consents to the transfer, sale, alienation, or assignment by PNGC of the entire Agreement and of all of PNGC's rights and obligations under this Agreement to a Scheduling Utility.



- (c) Bonneville hereby consents to the assignment by PNGC of this Agreement or of any of PNGC's rights under this Agreement as security for any indebtedness, whether present or future, of PNGC pursuant to any mortgage, trust, security agreement or similar instrument of indebtedness (each such instrument, a Debt Instrument) made by and between PNGC and any mortgagee, trustee, secured party or holder of such instrument of indebtedness, respectively; provided, however, that if PNGC has defaulted in the performance of its obligations under any Debt Instrument, such that the mortgagee, trustee, secured party or holder of such Debt Instrument, as the case may be, would be entitled at that time to accelerate the amount of indebtedness under such Debt Instrument, PNGC shall give Bonneville prompt written notice in reasonable detail of such default and shall, at Bonneville's election, enter into good faith discussions with Bonneville regarding the cure of such default.
  
- (d) If PNGC transfers, sells, alienates, or assigns, with Bonneville's consent, all or any portion of this Agreement and any rights and obligations pursuant to this Agreement to any person or party, PNGC shall give Bonneville written notice of such transfer, sale, alienation, or assignment within 10 days after the execution and delivery of the agreement effectuating such transaction by all parties to such transaction.

**7. OPERATION, MAINTENANCE, AND MANAGEMENT**

- (a) Pursuant to the terms and conditions of the Northwest Intertie Agreements, Bonneville is the operator of the PNW AC Intertie. As such, Bonneville is responsible for the dispatch of the PNW AC Intertie in accordance with Prudent Utility Practice. Bonneville's duties as operator of the PNW AC Intertie shall include, but are not limited to, consistent with Prudent Utility Practice and Northwest Intertie Agreements: (1) determining the PNW AC Intertie Operational Transfer Capability; (2) implementing and assisting in rectifying emergency outages on the PNW AC Intertie due to system emergencies or uncontrollable forces; (3) implementing maintenance

outages; and (4) giving and receiving switching orders on the PNW AC Intertie. In making any determination or in taking any other action referred to in the immediately preceding sentence, Bonneville shall give fair consideration to PNGC's interests to the extent such interests have been expressed to Bonneville in writing. Bonneville shall operate, maintain, and manage Bonneville's PNW AC Intertie, and study, plan, and implement Upgrades, consistent with Prudent Utility Practice.

- (b) Bonneville shall determine and revise as necessary the PNW AC Intertie Rated Transfer Capability consistent with Prudent Utility Practice and engineering studies based on then existing reliability criteria developed by the North American Electric Reliability Council, the Western Systems Coordinating Council, the Northwest Power Pool, and Bonneville. In the event the PNW AC Intertie Rated Transfer Capability is changed, Bonneville shall promptly notify PNGC in writing of such change and the new PNW AC Intertie Rated Transfer Capability. If and to the extent that the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability change substantially, Bonneville shall notify PNGC in writing of such change.
- (c) If at any time during the Term, Bonneville's PNW AC Intertie Rated Transfer Capability becomes less than 3450 MW, or if at any time during the Term there is an imminent likelihood that Bonneville's PNW AC Intertie Rated Transfer Capability would become less than 3450 MW, then Bonneville shall reinforce the Federal Columbia River Transmission System so as to raise Bonneville's PNW AC Intertie Rated Transfer Capability to 3450 MW or otherwise to prevent Bonneville's PNW AC Intertie Rated Transfer Capability from becoming less than 3450 MW. PNGC's Capacity Ownership Share shall not be decreased on account of any failure by Bonneville to reinforce the Federal Columbia River Transmission System pursuant to this subsection 7(c).

- (d) In the event that Bonneville implements a Reinforcement pursuant to subsection 7(c), Bonneville shall equitably allocate the Reinforcement Cost for such Reinforcement between Bonneville and PNGC based on factors including, but not limited to, load responsibility, contractual obligation and generation integration responsibility. Any equitable allocation or agreed to allocation (pursuant to the immediately succeeding sentence) of a Reinforcement Cost pursuant to this subsection 7(d) shall be reflected as a Reinforcement Cost in an Operating Plan proposed by Bonneville pursuant to section 13. To the extent that Bonneville and PNGC have agreed in writing to an allocation of a Reinforcement Cost incurred by Bonneville pursuant to an agreement or modification referred to in subsection 8(b), the Reinforcement Cost so allocated shall not be subject to arbitration pursuant to section 14 or section 15. Any Reinforcement Cost not allocated to PNGC pursuant to this subsection 7(d) shall not be payable by PNGC pursuant to this Agreement.
- (e) Bonneville shall provide PNGC notice of maintenance outages in accordance with the accepted standards for notice on the PNW AC Intertie. Such notice shall include an evaluation of the impact on PNGC's Scheduling Share. In scheduling or planning maintenance on PNW AC Intertie, Bonneville shall give fair consideration to PNGC's interests to the extent such interests have been expressed to Bonneville in writing.

## **8. EXISTING AGREEMENTS**

- (a) Bonneville shall use good faith efforts to maintain in effect the Interconnection Agreement or its successor.
- (b) Bonneville shall use its best efforts to maintain PNGC's rights under this Agreement (i) by making no modification to the Northwest Intertie Agreements, (ii) by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie, and (iii) by making no modification to the agreements referred to in the immediately

preceding clause (ii) that would have a substantial negative impact on PNGC's rights pursuant to sections 3, 4, 7, or to subsection 9(b), 9(c), or 11(a) without PNGC's prior written consent. Without limiting, modifying, or otherwise affecting any of its rights pursuant to sections 9, 13, 14, 15, and 16, PNGC hereby consents to Bonneville's modification of the Northwest Intertie Agreements or Bonneville's entering into other agreements or modification to such Agreements with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification or such agreement is made or entered into by Bonneville for the purpose of performing Bonneville's obligations pursuant to subsection 7(c).

**9. PAYMENT PROVISIONS**

As full compensation for their respective payment obligations under this Agreement, PNGC shall make payments to Bonneville in accordance with the provisions of this section 9, and Bonneville shall make payments and refunds to PNGC in accordance with the provisions of this section 9.

**(a) Lump Sum Payment**

- (1)** As soon as practicable after the Effective Date, Bonneville shall render a bill to PNGC for the Initial Lump Sum Payment (less the negotiation deposit, if any, with applicable interest as described in section C of Exhibit D) and such bill shall include as an attachment and as part of such bill a completed section C of Exhibit D, setting forth the calculation of such Initial Lump Sum Payment due Bonneville in accordance with section IV.A of the CO-94 rate set forth in Exhibit A. PNGC shall make such payment pursuant to the CO-94 rate and the applicable GTRSPs set forth in Exhibit A. Each of Bonneville and PNGC agrees that section C of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(2) Calculation and Billing of the Adjusted Capacity Ownership Price**

- (A) Approximately December 1995, or as soon as practicable thereafter, Bonneville shall, in accordance with section IV.B of the CO-94 rate set forth in Exhibit A, calculate the Adjusted Capacity Ownership Price to reflect actual construction costs of the facilities listed in section A of Exhibit D and the actual AFUDC with respect to such facilities. Such calculation shall be made in accordance with column 2, section B of Exhibit D.
- (B) Promptly after Bonneville has calculated the Adjusted Capacity Ownership Price pursuant to subparagraph 9(a)(2)(A), Bonneville shall render a bill or refund voucher to PNGC, and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2), section B of Exhibit D (with a completed column 2), and a completed section D of Exhibit D reflecting the Adjusted Lump Sum Payment. If the Adjusted Lump Sum Payment is greater than the Initial Lump Sum Payment, PNGC shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in such bill, which amount shall be equal to the amount set forth on line 7, section D of Exhibit D (such amount including interest as set forth on line 6, section D of Exhibit D). If the Adjusted Lump Sum Payment is less than the Initial Lump Sum Payment, Bonneville shall pay to PNGC, within 30 days after the date of such refund voucher, the amount set forth in such refund voucher, which amount shall be equal to the amount set forth on line 7, section D, of Exhibit D (such amount including interest as set forth on line 6, section D, of Exhibit D). Each of

Bonneville and PNGC agrees that sections A, B, and D of Exhibit D are consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(3) Calculation and Billing of the Revised Adjusted Capacity Ownership Price**

- (A) After payment is made by PNGC pursuant to subparagraph 9(a)(2)(B), or a refund is made by Bonneville to PNGC pursuant to subparagraph 9(a)(2)(B), Bonneville may, in accordance with the CO-94 rate set forth in Exhibit A, make one or more adjustments to the Adjusted Capacity Ownership Price; provided, that any such adjustment shall be made by Bonneville within 30 days after the date on which
- (i) Bonneville receives, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp or any other entity performing work for Bonneville on the Third AC Intertie Project, payment from Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, or
  - (ii) Bonneville pays, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, any amount to Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project; and
- provided, further, that no adjustment of the Adjusted Capacity Ownership Price or of any Revised Adjusted Capacity Ownership Price shall be made by Bonneville after December 31, 2005.

(B) Promptly after Bonneville has calculated a Revised Adjusted Capacity Ownership Price, Bonneville shall render to PNGC a bill or refund voucher with respect to such Revised Adjusted Capacity Ownership Price and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), section B of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), and a completed section E of Exhibit D reflecting the current Revised Adjusted Capacity Ownership Price and the current Revised Adjusted Lump Sum Payment. If the current Revised Adjusted Lump Sum Payment with respect to such Revised Adjusted Capacity Ownership Price is greater than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, then PNGC shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in the bill referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E, of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E, of Exhibit D). If the current Revised Adjusted Lump Sum Payment is less than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, Bonneville shall pay to PNGC, within 30 days after the date of such refund voucher, the amount set forth in the refund voucher referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E of Exhibit D with respect to

the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E of Exhibit D). Each of Bonneville and PNGC agrees that section E of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

- (4) For purposes of implementing the CO-94 rate, the following shall apply:
- (A) the calculations pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the adjustment "to reflect the difference between the actual and the estimated Capacity Ownership Price" required under section IV.B of the CO-94 rate;
  - (B) the calculations of interest pursuant to footnote 2 of section D of Exhibit D and footnote 2 of section E of Exhibit D shall be deemed to be the computation of "interest using the weighted average interest rate on Bonneville's outstanding bonds" required pursuant to section IV.B of the CO-94 rate;
  - (C) the calculations of the Adjusted Capacity Ownership Price and of the Revised Adjusted Capacity Ownership Price pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the determination of the "actual Capacity Ownership Price" required pursuant to section IV.B of the CO-94 rate;
  - (D) as used in the CO-94 rate, the terms "Bonneville's PNW AC Intertie," "PNW AC Intertie," "Third AC Intertie," "Third AC Intertie Project," and "Third AC Intertie System Reinforcement" shall be deemed to have the respective meanings of such terms set forth in section 1;



- (E) as used in the CO-94 rate, the term "Capacity Ownership Share" shall be deemed to mean "Capacity Ownership Percentage" as defined in section 1;
- (F) the indirect costs and overhead costs described in footnote 5 of section B of Exhibit D shall be deemed to be the indirect costs and overhead costs referred to in section III.A of the CO-94 rate; and
- (G) the last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

- (5) For purposes of application of the CO-94 rate set forth in Exhibit A, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (A) section I;
  - (B) section III.A;
  - (C) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;

- (D) subsection 4 of section IV.A;
- (E) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A; and
- (F) for purposes of subsection 16(e) of this Agreement and as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

(b) **Annual Charges**

(1) **Payments Pursuant to AC-93 Rate**

- (A) From and after the first Working Day after Bonneville receives payment from PNGC pursuant to paragraph 9(a)(1), Bonneville shall bill PNGC on the monthly power bill in accordance with the AC-93 rate set forth in Exhibit A. PNGC shall pay such bill in accordance with the applicable GTRSPs set forth in Exhibit A.
- (B) For purposes of application of the AC-93 rate, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (i) section I;
  - (ii) section III.A;
  - (iii) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;

- (iv) the first sentence of subsection 3 of section IV.A;
  - (v) subsection 4 of section IV.A;
  - (vi) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A;
  - (vii) the first paragraph of subsection 6 of section IV.A; and
  - (viii) as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.
- (C) The last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:
- The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.
- (D) Bonneville hereby agrees that the provisions of the AC-93 rate shall have no application or effect with respect to the following:
- (i) any replacement of the series capacitor banks containing polychlorinated biphenyl at the Sand Springs, Sycan and Fort Rock Substations; and

(ii) any replacement commenced prior to the Effective Date or not completed prior to September 30, 1995.

(E) Upon and after the effective date of the annual costs rate set forth in Exhibit B, Bonneville shall cease billing PNGC pursuant to the AC-93 rate.

(2) **Payments Pursuant to Annual Costs Rate**

From and after the date the annual costs rate set forth in Exhibit B becomes effective, the following shall apply:

(A) **Operations Costs, Maintenance Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs**

(i) During each fiscal year during the Term, Bonneville shall bill PNGC on the monthly power bill, and PNGC shall pay, pursuant to Exhibit B, forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for such fiscal year. Such costs shall be, respectively, the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the fiscal year in which such month occurs.

(ii) Within eight months after the end of each fiscal year during the Term (such fiscal year being

hereinafter referred to as a "Fiscal Year"), Bonneville shall determine and calculate, pursuant to Exhibit I, Schedules A, B, D, E, F, G, and H, actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year most recently ended.

- (iii) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year is greater than the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year, Bonneville shall refund to PNGC the difference between such forecast costs and such actual costs as a lump sum payment, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Bonneville shall, promptly following the date on which the calculation of such difference is made, provide PNGC written notice of such refund. Within the 30-day period referred to in the first sentence of this section 9(b)(2)(A)(iii), Bonneville shall provide to PNGC an Operating Plan amended in accordance with subsection 13(k) containing revised schedules in the format set forth in

Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (iv) If, based on the calculation performed pursuant to subparagraph 9(b)(2)(A)(ii), the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is equal to or less than 105 percent, but greater than 100 percent, of the sum of the forecast Operations costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs in the Operating Plan for the Fiscal Year, Bonneville shall bill to PNGC on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. PNGC shall pay such bill in accordance with the Billing Provisions. Within the 30-day period referred to in the immediately preceding sentence, Bonneville shall provide to PNGC an amended Operating Plan containing revised schedules in the format set forth in Exhibit I, Schedules A, B,

D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (v) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the actual Operations Cost, actual Maintenance Cost, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is greater than 105 percent of the sum of the forecast Operations Cost, forecast Maintenance Cost, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year, Bonneville shall bill to PNGC on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. PNGC shall pay such bill in accordance with the Billing Provisions; provided, however, that Bonneville shall not bill PNGC pursuant to this section 9(b)(2)(A)(v) any amount which exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and

Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year unless and until such amount which exceeds 100 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year has been included in an Operating Plan amended pursuant to subsection 13(k).

- (vi) Simple interest shall be accrued on payments or refunds due pursuant to this paragraph 9(b)(2) with respect to any fiscal year during the Term using the weighted average interest rate on Bonneville's outstanding bonds or other debt instruments then used by Bonneville and such interest shall accrue from (and including) the date of the last day of such fiscal year to (but excluding) the date of refund to PNGC or to (but excluding) the due date of a payment due Bonneville.

**(B) Replacement Cost and Reinforcement Cost**

Bonneville shall bill PNGC on the monthly power bill Replacement Costs for any Replacement and Reinforcement Costs for any Reinforcement. Bonneville shall render such bill within 15 months following the date on which the project work order for such Replacement or such Reinforcement, as the case may be, is closed. PNGC shall pay such bill pursuant to Exhibit B and sections 9(b)(2)(B)(i), 9(b)(2)(B)(ii), 9(b)(2)(B)(iii) and 9(b)(2)(B)(iv).



- (i) If the forecast Replacement Cost for a Replacement is greater than the actual Replacement Cost for such Replacement or if the forecast Reinforcement Cost for a Reinforcement is greater than the actual Reinforcement Cost for such Reinforcement, Bonneville shall bill PNGC the actual Replacement Cost for such Replacement or the actual Reinforcement Cost for such Reinforcement, as the case may be. Bonneville shall provide to PNGC an Operating Plan amended in accordance with subsection 13(k) containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement, as the case may be.
- (ii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is equal to or less than 105 percent, but greater than 100 percent, of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill PNGC such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and PNGC shall pay such bill pursuant to subparagraph 9(b)(2)(B). Bonneville shall provide to PNGC an amended Operating Plan containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the difference between the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement.

- (iii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is greater than 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill PNGC such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and PNGC shall pay such bill pursuant to subparagraph 9(b)(2)(B); provided, however, that Bonneville shall not bill PNGC pursuant to this subparagraph 9(b)(2)(B) any amount which exceeds 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, as the case may be, unless and until such amount which exceeds 100 percent of such forecast Replacement or such forecast Reinforcement Cost, as the case may be, has been included in an amended Operating Plan pursuant to subsection 13(k).
- (iv) Charges pursuant to sections 9(b)(2)(B)(i), (ii) and (iii) for Replacement Costs and Reinforcement Costs shall accrue simple interest pursuant to section III.D of Exhibit I.

(c) **Upgrade Charges**

For purposes of implementing the CO-94 rate, the following shall apply:

- (1) as used in the CO-94 rate, the term "upgrade" shall be deemed to mean "Upgrade" as defined in section 1, the term "rated transfer capability" shall be deemed to mean "PNW AC Intertie Rated Transfer Capability" as defined in section 1 and the term

"AFUDC" shall be deemed to have the meaning set forth for such term in section 1;

- (2) the "Capacity Ownership Share of the capital and related cost of the upgrade," referred to in section III.B of the CO-94 rate shall be deemed to be the costs pursuant to subsection 5(d) and subparagraph 5(e)(3)(B), as applicable; and
- (3) "construction costs (including direct, indirect and overhead costs) and AFUDC" referred to in section III.B of the CO-94 rate and "related costs" referred to in section III.B of the CO-94 rate together shall be deemed to be Upgrade costs and shall be determined in the same manner in which Replacement Costs are determined pursuant to section III of Exhibit I; provided, however, that expenses that are properly allocable to an Upgrade (i.e., "related costs" referred to in section III.B of the CO-94 rate) in accordance with generally accepted accounting principles (as defined in Exhibit I) may be included by Bonneville in Upgrade costs for such Upgrade.

**(d) Payments of Charges Pursuant to Section 3(b)(1)(C)(i)**

Bonneville shall bill PNGC for wheeling provided pursuant to section 3(b)(1)(C)(i) on PNGC's monthly power bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A and PNGC shall pay such bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A; provided, however, that under any successor to the IS-93 rate, PNGC shall not be obligated to pay any rate or charge greater than the rate or charge payable by any other party to which Bonneville provides nonfirm wheeling services on Bonneville's PNW AC Intertie for such party's nonfirm transaction of a duration similar to PNGC's wheeling transaction pursuant to section 3(b)(1)(C)(i).

(e) **Suspension for Failure to Perform**

- (1) If at any time during the term of this Agreement Bonneville does not receive payment due and owing to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d), Bonneville shall be entitled to suspend performance of its obligations to PNGC pursuant to section 4 without incurring any liability to PNGC therefor; provided, that Bonneville shall not be entitled to suspend performance pursuant to this paragraph 9(e)(1) earlier than five Working Days following receipt from Bonneville by PNGC of written notice of such suspension. Such suspension shall continue in effect until the next Working Day following the Working Day on which PNGC makes payment in full to Bonneville of the balance owed to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d). During the period of such suspension, PNGC shall not be entitled to participate through the Committee in any review of an Operating Plan commenced by the Committee pursuant to section 13 during such period of suspension, or to participate in any arbitration commenced by the Committee pursuant to sections 14 and 15 during such period of suspension, or to participate in any audit commenced by the Committee pursuant to section 16 during such period of suspension.
- (2) If during any period in any month Bonneville fails to make deliveries in accordance with subsection 4(c), PNGC shall be entitled, without incurring any liability to Bonneville therefor, to delay any payment due and owing to Bonneville by PNGC pursuant to subsection 9(b) or 9(d) for a period, equal to the period during which Bonneville failed to make such deliveries, commencing on the date the monthly power bill for such month would otherwise be payable by PNGC pursuant to this Agreement; provided, however that PNGC's entitlement pursuant to this paragraph 9(e)(2) shall apply only with respect

to the amount of such monthly power bill to be paid directly to Bonneville or its agent.

**(f) Payments or Refunds by Bonneville**

- (1) Bonneville shall make any payment to PNGC pursuant to subparagraph 3(b)(1)(B) within 30 days following the end of the month in which such payment becomes due to PNGC pursuant to subparagraph 3(b)(1)(B).**
- (2) Bonneville shall pay to PNGC, in a lump sum, any refund due to PNGC pursuant to subsection 16(e) or paragraph 16(f)(2) within 30 days following the date on which such refund becomes due to PNGC pursuant to subsection 16(e) or paragraph 16(f)(2), respectively.**
- (3) Bonneville shall pay any refund, credit, or payment due to PNGC under section 18 pursuant to the terms and conditions set forth in section 18.**
- (4) Each payment, credit or refund due to PNGC by Bonneville pursuant to this Agreement shall be made by Bonneville, at Bonneville's option, (A) by check payable to the order of PNGC, (B) by electronic funds transfer of immediately available funds into such account as may be designated in writing by PNGC from time to time for such purpose or (C) by crediting the amount of such payment, credit or refund on PNGC's power bill.**

**10. TRANSMISSION LOSSES**

- (a) To compensate Bonneville for transmission losses incurred by Bonneville in making deliveries scheduled by PNGC pursuant to this Agreement, PNGC shall make available, or arrange to have made available, to Bonneville, at any point mutually acceptable to the Parties at which the respective electric systems of PNGC and**

Bonneville are interconnected, on the corresponding hour 168 hours later or on another hour to be agreed upon, the amounts of electric power equal to PNGC's net PNW AC Intertie schedule multiplied by the appropriate loss factor specified in Exhibit E. PNGC's net PNW AC Intertie schedule shall be, for any given hour, the absolute value of the sum of PNGC's north-to-south schedules (positive) and south-to-north schedules (negative) for such hour.

- (b) Upon the conclusion of any review by Bonneville of the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan provided to the Committee pursuant to section 13. The Committee may make recommendations regarding such results and any revisions to the loss factor in Exhibit E, Part A. Only recommendations regarding assumptions (including, without limitation, data inputs and source of date) made by Bonneville in its review or revision of the loss factor in Exhibit E, Part A, and recommendations regarding the results of such review or revision shall be subject to arbitration pursuant to section 14.
- (c) PNGC's Scheduling Share shall not be reduced by any amount of losses returned to Bonneville pursuant to subsection 10(a).

## 11. **REMEDIAL ACTIONS**

- (a) **Bonneville's Responsibilities**
  - (1) Within five days after the Effective Date, Bonneville shall notify PNGC in writing of the plan for remedial actions required to maintain the PNW AC Intertie Rated Transfer Capability, which plan shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice. If and to the extent that such plan is amended, modified, or replaced, Bonneville shall, promptly following such amendment, modification, or replacement, provide written

notice to PNGC of such amendment, modification, or replacement, as the case may be. Bonneville shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, required to maintain the portion of Bonneville's PNW AC Intertie Rated Transfer Capability not purchased by Capacity Owners. Such remedial actions shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice.

- (2) Bonneville shall be responsible for generating appropriate control signals for transmission to PNGC for purposes of effectuating remedial actions pursuant to this section.

**(b) PNGC's Responsibilities**

- (1) PNGC shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other remedial actions required to maintain PNGC's Capacity Ownership Share. Such remedial actions shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1) and Prudent Utility Practice. Bonneville may perform engineering analyses to confirm PNGC's providing capability to arm and having available appropriate remedial actions pursuant to this paragraph 11(b)(1).
- (2) In any given hour, PNGC shall be responsible for providing sufficient remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, to maintain PNGC's schedule on the PNW AC Intertie for such hour. To the extent that load tripping or generator dropping is required as a remedial action by PNGC pursuant to this paragraph 11(b)(2) in any given hour, the required amount of such load tripping or such generator dropping shall be

determined by dividing the amount of power scheduled by PNGC on PNGC's Scheduling Share in such hour by the total amount of power scheduled on the PNW AC Intertie in such hour and multiplying the result by the total amount of generation or load (in MW) to be armed for the PNW AC Intertie in such hour.

- (3) PNGC shall provide, design, operate, and maintain the necessary equipment to accept control signals from Bonneville and to transmit such signals to PNGC's generator dropping, load tripping, or other remedial action sites, and to arm and initiate the appropriate control action(s). Such design, operation, and maintenance shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1), and Prudent Utility Practice.
- (4) PNGC and Bonneville may mutually agree that Bonneville will, pursuant to terms and conditions mutually acceptable to the Parties, provide the remedial actions required of PNGC pursuant to subsection 11(b).

## **12. CAPACITY OWNERS' COMMITTEE**

### **(a) Composition of Committee**

PNGC may appoint one representative (and an alternate who may act in the absence of such representative) as a member of the Capacity Owners' Committee (Committee). If during any period PNGC fails to appoint a representative to the Committee, PNGC waives any and all rights during such period that would otherwise have accrued to it, individually or as a member of the Committee, pursuant to sections 12, 13, 14, 15, and 16 of this Agreement. PNGC hereby appoints as its representative pursuant to this subsection the following representative and alternate to the Committee:

**Representative: Director of Power Management**



Alternate:

**(b) Convening Meetings**

- (1) Any Capacity Owner that has appointed a representative to the Committee may convene a meeting of the Committee pursuant to the procedures set forth in subsection 12(e). The Capacity Owner convening a Committee meeting shall be responsible for preparing any necessary notices, identifying the subject matter and issues to be discussed, and transmitting notices and relevant documents to the other Committee members and, if appropriate, to Bonneville.
- (2) At the written request of any Capacity Owner that has appointed a representative to the Committee, Bonneville shall attend Committee meetings.
- (3) The Committee may conduct business only at a properly convened meeting at which a quorum, as defined in subsection 12(c), is present. The Committee shall make or convey any request, designation, recommendation, notice, appointment, submission, audit report or exception, or statement to which Bonneville is required to respond or which creates or triggers an obligation of Bonneville, pursuant to this Agreement, only upon a decision of the Committee made at a properly convened meeting at which a quorum is present.
- (4) Each fiscal year, Bonneville shall convene an annual meeting of the Committee. The purpose of such annual meeting shall be to discuss the Operating Plan delivered, pursuant to subsection 13(b), to each Capacity Owner that has appointed a representative to the Committee. Bonneville shall convene such annual meeting no earlier than 15 days, but no later than 30 days, following the date of such delivery of the Operating Plan.

(5) In addition to the meeting referred to in paragraph 12(b)(4), Bonneville may, at its discretion, convene meetings of the Committee, pursuant to the procedures set forth in subsection 12(e), to present to the Committee any information Bonneville deems relevant.

(c) **Meeting Quorum**

The respective representatives of all of the Capacity Owners that have appointed a representative to the Committee, less one, shall constitute a quorum.

(d) **Meetings by Telephone Conference**

Committee meetings pursuant to the Capacity Ownership Agreements may be conducted by telephone provided all Capacity Owners and, if appropriate, Bonneville, are notified pursuant to the procedures set forth in subsection 12(e) of any such meeting.

(e) **Meeting Notices**

(1) All Committee meeting notices pursuant to the Capacity Ownership Agreements shall be provided in writing no less than 14 days prior to such meeting.

(2) Any Committee meeting notice required by this section shall be deemed properly made if delivered in person, by electronic facsimile, or by mail or other qualified delivery service, postage prepaid, to the person specified below:

**If to Bonneville:**

**Group Vice President for Marketing, Conservation and  
Production**

**Bonneville Power Administration**

**905 NE 11th Avenue**

**Portland, OR 97232**

**Telephone (503) 230-5152**

**Facsimile (503) 230-5207**

**If to Puget:**

**Vice President Power Planning**

**Puget Sound Power & Light Company**

**411 108th Avenue NE 15th Floor**

**Bellevue, WA 98004-5515**

**Telephone (206) 462-3137**

**Facsimile (206) 462-3175**

**If to Seattle:**

**Director, Power Management Division**

**Seattle City Light**

**1111 Third Avenue, Room 420**

**Seattle, WA 98101**

**Telephone (206) 386-4530**

**Facsimile (206) 386-4955**

**If to PNGC:**

**Director of Power Management**

**Pacific Northwest Generating Cooperative**

**711 NE Halsey Street, Suite 200**

**Portland, OR 97232**

**Telephone (503) 288-1234**

**Facsimile (503) 288-2334**

If to Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201  
Telephone (206) 258-8211  
Facsimile (206) 258-8305

If to Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411  
Telephone (206) 502-8294  
Facsimile (206) 502-8628

Attendance at a meeting by a representative of a Capacity Owner constitutes waiver by such Capacity Owner of notice of such meeting.

- (3) Either Party may, by written notice to the other Party and to the Capacity Owners other than PNGC, change the designation, address, or facsimile number of the person so specified by it in subsection 12(a) or paragraph 12(e)(2).

**13. OPERATING PLAN AND AMENDMENTS TO THE OPERATING PLAN**

- (a) The provisions of this section shall become effective commencing August 1, 1995; provided, however, that unless and until the annual costs rate set forth in Exhibit B is approved by FERC on an interim basis, Bonneville shall not have any right pursuant to this Agreement to bill or charge to PNGC, and PNGC shall not have any obligation

pursuant to this Agreement to pay to Bonneville, any amount pursuant to any Operating Plan.

**(b) Delivery of Operating Plan**

- (1) On or before August 1, 1995, Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1996 and an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1997.**
- (2) Not later than one year preceding the first day of each fiscal year, other than the fiscal years specified in paragraph 13(b)(1), Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for such fiscal year.**

**(c) Each Operating Plan delivered pursuant to subsection 13(b) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast costs for the fiscal year to which such Operating Plan pertains, and such Operating Plan may contain such other information as Bonneville may deem relevant; and each amendment of an Operating Plan delivered pursuant to subsection 13(k) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast or actual costs, as appropriate, for the fiscal year to which such Operating Plan pertains, and such amendment may contain such other information as Bonneville may deem relevant:**

- (1) a forecast of, or the actual, Allocated Direct Cost of Operations Cost (pursuant to section I.C of Exhibit I), Indirect Cost of Operations Cost (pursuant to section I.D of Exhibit I), and Overhead Cost of Operations Cost (pursuant to section I.E of Exhibit I) in the format set forth in Exhibit I, Schedule A;**

- (2) a forecast of, or the actual, Direct Cost of Maintenance Cost (pursuant to section II.B of Exhibit I), Indirect Cost of Maintenance Cost (pursuant to section II.D of Exhibit I), and Overhead Cost of Maintenance Cost (pursuant to section II.E of Exhibit I) in the format set forth in Exhibit I, Schedule B;
- (3) a forecast of, or the actual, Direct Cost of Replacements and Reinforcements (pursuant to section III.A of Exhibit I), Indirect Cost and Overhead Cost of Replacements and Reinforcements (pursuant to section III.B of Exhibit I), and AFUDC of Replacements and Reinforcements (pursuant to section III.C of Exhibit I) in the format set forth in Exhibit I, Schedule C, for each Reinforcement and Replacement which is expected to be, in the fiscal year to which the Operating Plan pertains, a planned new start, construction work in progress on a previously initiated Reinforcement or Replacement, as the case may be, or a closed work order. The forecast shall include for each such Reinforcement or Replacement an estimate of the total cost of construction and the cost to be incurred with respect to such Reinforcement or Replacement during each fiscal year until the work order for such Reinforcement or Replacement has been closed. Bonneville may elect, but shall not be required, to include in any such forecast the information set forth in the immediately preceding sentence regarding any Replacement and Reinforcement which is expected to be planned a new start in any fiscal year following the fiscal year to which the Operating Plan pertains. In the event Bonneville elects to forecast Direct Cost, Indirect Cost, and Overhead Cost of any Reinforcement or Replacement which is expected to be a planned new start in any fiscal year subsequent to the fiscal year to which the Operating Plan pertains, Bonneville shall provide to the Committee such forecast costs, in the format set forth in Exhibit I, Schedule C (together with additional information pertinent to such forecast costs as required by paragraph 13(c)(9)), 30 days prior to the date such Operating Plan is delivered to the Committee pursuant to subsection

- 13(b). In addition, Bonneville shall include such forecast costs in the Operating Plan delivered to the Committee pursuant to subsection 13(b);
- (4) the General Plant Cost (pursuant to section IV of Exhibit I) in the format set forth in Exhibit I, Schedule D;
  - (5) a forecast of, or the actual, Other Costs (pursuant to section V of Exhibit I) in the format set forth in Exhibit I, Schedule E;
  - (6) a forecast of, or the actual, Contracts and Rates Costs (pursuant to section VI of Exhibit I) in the format set forth in Exhibit I, Schedule F;
  - (7) a forecast of, or the actual, Power Scheduling Costs (pursuant to section VII of Exhibit I) in the format set forth in Exhibit I, Schedule G;
  - (8) a forecast of, or the actual, End of Term Costs (pursuant to section VIII of Exhibit I) in the format set forth in Exhibit I, Schedule H. Such forecast shall include Bonneville's proposed apportionment of such End of Term Costs among PNGC and Capacity Owners other than PNGC and Bonneville's rationale for such apportionment;
  - (9) additional information pertinent to the forecast costs, actual costs, and General Plant Cost provided pursuant to paragraphs 13(c)(1) through 13(c)(8), including, without limitation, descriptions of the activities or projects and explanations of the costs comprising the Direct Cost components of such forecast costs, actual costs, and General Plant Cost, and explanations of MFU counts; and
  - (10) if Bonneville has reviewed the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), the Operating Plan shall contain the results of such review, including any revision to the loss

factor in Exhibit E, Part A, pursuant to subsection 10(b), and any additional information pertinent to such review.

**(d) Requests by Committee**

(1) No later than 15 days after the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), the Committee may make a single request of Bonneville in writing for:

(A) such supporting documentation, data, and information as may be reasonably necessary to analyze (i) the Operating Plan, or its constituent parts, delivered to the Committee pursuant to subsection 13(b), or (ii) any amendment to an Operating Plan pursuant to subsection 13(k); and

(B) such documentation, data, and information relating to Bonneville's present or past activities or practices concerning Bonneville's PNW AC Intertie and to alternatives considered by Bonneville to costs or activities described in the Operating Plan or any amendment to an Operating Plan as may be reasonably necessary for the Committee to formulate recommendations pursuant to subsection 13(e);

provided, however, that with regard to requests for documentation, data, and information pursuant to this paragraph 13(d)(1), the Committee must designate in such request the specific item in the Operating Plan or in any amendment to an Operating Plan to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information. Such single request may contain multiple parts.



- (2) The Committee shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to paragraph 13(d)(1).
- (3) Bonneville shall have 20 days from the date it receives any request pursuant to paragraph 13(d)(1) to provide the documentation, data, and information requested; provided, however, that Bonneville shall be under no obligation (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Committee, or (D) to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or any regulation and Executive Order applicable to Bonneville.
- (4) The Committee in such request shall designate one of its members to be its representative for the sole purpose of receiving such documentation, data, or information from Bonneville pursuant to this subsection 13(d). Bonneville shall deliver such documentation, data, or information to the representative designated by the Committee to receive such materials.
- (5) For purposes of this subsection 13(d) and subsection 13(f), each of Bonneville and the Committee shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests for, documentation, data, and information and responses to such requests.

- (e) The Committee shall have 20 days from the date on which it receives documentation, data, or information from Bonneville pursuant to subsection 13(d) or, if none was requested, 50 days from the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), whichever date is later, to recommend to Bonneville in writing a revision or revisions to any forecast cost or General Plant Cost in the Operating Plan. The Committee shall have the time periods set forth in subsection 13(m) to recommend to Bonneville in writing a revision or revisions to a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan. Such recommendation shall set forth, at a minimum, the exact revisions to the forecast cost or General Plant Cost proposed by the Committee and the reasons for such revisions. Failure of the Committee to recommend a revision or revisions to all or any portion of a forecast cost or General Plant Cost in the Operating Plan or a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan within the applicable time limit set forth above shall be deemed to constitute acceptance by the Committee of all portions of the forecast costs and General Plant Cost of the Operating Plan for which the Committee has not recommended a revision.
- (f) No later than 15 days after receipt of a Committee recommendation made pursuant to subsection 13(e), Bonneville may make a single request (which may contain multiple parts) in writing of the Committee for such supporting documentation, data, and information as may be reasonably necessary to analyze the Committee's recommendation, including without limitation, any estimated costs or forecast costs contained in such recommendation; provided, however, that the Capacity Owners that have appointed a representative to the Committee shall be under no obligation (1) to create additional documentation, data, or information, (2) to provide documentation, data, or information that is not readily available to the Committee or to any Capacity Owner that has appointed a member to the Committee, (3) to provide to Bonneville documentation, data, or information that the Committee has previously provided to Bonneville; provided, further, that with regard to requests for

documentation, data, and information pursuant to this subsection 13(f), (1) Bonneville must designate in such request the specific item in the Committee's recommendation to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information, and (2) Bonneville shall use reasonable efforts, consistent with Bonneville's needs as set forth in this subsection 13(f), to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to this subsection. Such single request shall be made of the Committee by delivering a copy of the request to each Capacity Owner that has appointed a representative to the Committee. The Committee shall have 20 days from the date of its receipt of Bonneville's request to provide a single response containing the documentation, data, and information requested.

- (g) If the Committee makes any recommendation in writing pursuant to subsection 13(e), Bonneville shall have the greater of 15 days from the date of receipt of the requested documentation, data, and information requested pursuant to subsection 13(f) or, if none was requested, 30 days from the date of receipt of the Committee's recommendations made pursuant to subsection 13(e) to, by written notice to each Capacity Owner that has appointed a representative to the Committee, accept the recommendation, accept the recommendation in part, reject the recommendation, or propose an action that is responsive to the Committee's recommendation and that is different from Bonneville's proposal contained in the Operating Plan. If Bonneville makes such a proposal, Bonneville shall set forth in such written notice the exact revisions to the Operating Plan. The Committee shall have 7 days from the date of receipt of Bonneville's proposal to make any requests in writing for supporting documentation, data, and information as set forth in subsection 13(d). Bonneville shall have 7 days to respond to those requests as set forth in subsection 13(d). Failure of Bonneville to respond in writing to any recommendation of the Committee within the applicable time period set forth in this subsection 13(g) shall be deemed to constitute rejection of such recommendation.

- (h) If Bonneville rejects all or any portion of the Committee's recommendation, or if the Committee elects not to accept a proposal made by Bonneville pursuant to subsection 13(g), then the Committee may
  - (1) elect by written notice to Bonneville to refer to binding arbitration, pursuant to section 14 and consistent with subsections 13(i) and 14(b), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g); and
  - (2) elect by written notice to Bonneville to refer to nonbinding arbitration pursuant to section 15 and consistent with subsections 15(a) and 15(d), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g).

**Failure of the Committee to elect to refer to arbitration**

- (A) such portion of any recommendation of the Committee not accepted by Bonneville within 15 days following Bonneville's rejection or acceptance in part of such recommendation of the Committee pursuant to subsection 13(g), or
- (B) any proposal made by Bonneville pursuant to subsection 13(g) within 15 days following Bonneville's written notice of such proposal or, if documentation, data, or information was requested by the Committee pursuant to subsection 13(g), within 15 days following receipt by the Committee of such documentation, data, or information pursuant to subsection 13(g),

shall be deemed to constitute acceptance by the Committee of Bonneville's rejection or acceptance in part of the recommendation of the Committee or of Bonneville's proposal and waiver by the Committee of any right pursuant to this section 13 or to section 15 to arbitrate such recommendation or portion thereof.

- (i) The Committee may, subject to the immediately succeeding sentence, arbitrate, pursuant to subsection 13(h), any recommendation by the Committee concerning a revision pursuant to this Agreement to a loss factor set forth in any Operating Plan or in any amendment to an Operating Plan or concerning any forecast cost or actual (allocated or otherwise) cost set forth in any Operating Plan or in any amendment to an Operating Plan (including the following costs and related items set forth in any Operating Plan, or in any amendment to an Operating Plan, pursuant to Exhibit I, Schedule A, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; Exhibit I, Schedule B, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; Exhibit I, Schedule C, lines 1, 2, 3, 4 and 5; Exhibit I, Schedule D, lines 3, 4, 5, 6, 7, 8, 9, 10 and 11; Exhibit I, Schedule E, lines 2 and 3; Exhibit I, Schedule F, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; Exhibit I, Schedule G, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; and Exhibit I, Schedule H, lines 1, 2, 3, and 4). The Committee's right pursuant to this subsection 13(i) to arbitrate any such recommendation shall be subject to the following limitations:
- (1) if such recommendation, or portion thereof, includes a Replacement Cost for a Replacement or a Reinforcement Cost for a Reinforcement, and such Replacement Cost or Reinforcement Cost was included in a previous Operating Plan (either of such costs, a Previous Operating Plan Cost), the Committee may arbitrate pursuant to this subsection 13(i) such recommendation, or portion thereof, only to the extent that such recommendation, or portion thereof, includes any Replacement Cost or Reinforcement Cost in excess of the Previous Operating Plan Cost;

- (2) the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, pertaining to a revision to a loss factor pursuant to this Agreement only to the extent such arbitration is permitted by subsection 10(b);
- (3) the Committee may arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning an Other Cost only to the extent that such Other Cost is a cost set forth in an Operating Plan or amendment to an Operating Plan pursuant to Exhibit I, Schedule E, line 2 and such recommendation, or portion thereof pertains to whether such Other Cost is properly allocated to Bonneville's PNW AC Intertie pursuant to Exhibit I, section V;
- (4) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in such Operating Plan or in any amendment to an Operating Plan, the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan only to the extent that such actual cost exceeds 105 percent of the forecast cost for such activity or such project; provided, however, that, without limiting any of PNGC's rights and benefits pursuant to subsection 16(c), the Committee may not arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan or in any amendment to an Operating Plan if such actual cost is less than 105 percent of the forecast for such activity or such project;

- (5) the Committee may not arbitrate, pursuant to this subsection 13(i), (a) the allocation by Bonneville pursuant to this Agreement of any of its costs to overall overhead costs or to overall indirect costs, or (b) the allocation by Bonneville pursuant to this Agreement of a portion of Bonneville's overall overhead costs and overall indirect costs to its total system operations costs, its total system maintenance costs, its total capital costs or its total indirect and overhead power scheduling costs; provided, however, that nothing in this paragraph (5) shall be deemed to prevent or restrict the Committee from arbitrating pursuant to this subsection 13(i) the level (rather than the allocation) of any of Bonneville's Exhibit I, Schedule A, line 9 total system operations indirect costs and line 11 total system operations overhead costs; Bonneville's Exhibit I, Schedule B, line 11 total system maintenance indirect costs and line 13 total system maintenance overhead costs; Bonneville's total capital costs; Bonneville's Exhibit I, Schedule F, line 6 total indirect contracts and rates costs and Bonneville's Exhibit I, Schedule F, line 7 total overhead contracts and rates costs; or Bonneville's Exhibit I, Schedule G, line 6 total indirect power scheduling costs and Bonneville's Exhibit I, Schedule G, line 7 total overhead power scheduling costs;
- (6) the Committee may not arbitrate any recommendation, or any portion thereof, regarding any amendment to an Operating Plan made pursuant to sections 9(b)(2)(A)(iv) and 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2);
- (7) the Committee may not arbitrate any such recommendation, or portion thereof, to the extent that in doing so the arbitrators would be required to decide a matter of law in order to render a decision pursuant to subsection 14(h). If, subsequent to the Effective Date, Bonneville is given legal authority to submit to binding arbitration matters of law, Bonneville shall enter into

good faith negotiations with PNGC and Capacity Owners other than PNGC regarding a revision to this paragraph 13(i)(7) enabling arbitration of matters of law pursuant to this subsection 13(i) consistent with such legal authority; and

- (8) the Committee may not arbitrate any recommendation, or portion thereof, regarding an allocation of a Reinforcement Cost to the extent prohibited by subsection 7(d).

In arbitrating any recommendation, or portion thereof, pursuant to this subsection 13(i), the Committee may raise in support of such recommendation arguments regarding whether any forecast or actual cost should be based upon activities different in degree, but not in kind, from the activities upon which such forecast or actual cost in the Operating Plan is based.

- (j) Each Operating Plan provided pursuant to subsection 13(b) which has completed the Committee review process set forth in subsections 13(d) through 13(g) shall take effect on the first day of the fiscal year to which such Operating Plan pertains and shall remain in effect for the duration of such fiscal year.
- (k) At any time during the fiscal year in which an Operating Plan is in effect, or within 8 months after the end of such fiscal year, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast or actual Operations Cost, Maintenance Cost, General Plant Cost, Other Cost, Contracts and Rates Cost, Power Scheduling Cost, or End of Term Cost in such Operating Plan. At any time during the fiscal year an Operating Plan is in effect, or within 30 months after a work order for a Replacement or Reinforcement is closed, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast cost or actual cost component for such Replacement or Reinforcement.



- (l) Any amendment made to any Operating Plan pursuant to subsection 13(k) shall be provided by delivery of a copy in writing of such amendment by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (m) Consideration of amendments to the Operating Plan pursuant to subsection 13(l) shall be consistent with the procedures set forth above in subsections 13(c) through 13(k), except that the time limits set forth in such subsections shall be reduced as follows: 15 days shall be 7 days, 20 days shall be 10 days, 30 days shall be 15 days, and 50 days shall be 25 days. For purposes of computing the time limits in this subsection 13(m), the date Bonneville provides the Capacity Owners with a proposed amendment, pursuant to subsection 13(k), shall be deemed to be the date the annual meeting was convened for purposes of paragraph 13(d)(1) and subsection 13(e).
- (n) Without limiting any of PNGC's rights and benefits pursuant to subsection 13(i) and sections 14 and 15, any Operating Plan amended pursuant to section 9(b)(2)(A)(v) or 9(b)(2)(B)(iii), or subsection 13(k) shall take effect when such amendment is accepted by the Committee pursuant to subsection 13(e) or 13(h). Any Operating Plan amended pursuant to section 9(b)(2)(A)(iii), 9(b)(2)(A)(iv), 9(b)(2)(B)(i), or 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2) shall take effect as soon as such amendment is delivered by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (o) An Operating Plan shall, during the fiscal year in which such Operating Plan is in effect, establish the costs which PNGC is obligated to pay pursuant to the terms and conditions of this Agreement. In no event shall such Operating Plan, or any portion thereof, contain or constitute an obligation of Bonneville to undertake, or to expend funds on, activities described or indicated in such Operating Plan.

**14. ARBITRATION**

- (a) During any arbitration process conducted pursuant to this section 14, PNGC shall act through the Committee. Each of Bonneville and PNGC agrees to be bound by any decision rendered by the arbitrators in any arbitration brought pursuant to subsection 13(i) and this section 14.
- (b) The Committee may initiate arbitration pursuant to subsection 13(i) by taking the following actions:
  - (1) an affirmative vote to initiate arbitration by at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  - (2) either of the following:
    - (a) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to subsection 13(i) within the applicable time period established in subsection 13(h); or
    - (b) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subsection 14(b) shall set forth in detail the matter or matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (c) Bonneville shall, within 10 Working Days after receipt of the notice by the Committee referred to in subsection 14(b), appoint a second arbitrator and provide by written notice to each Capacity Owner that

has appointed a representative to the Committee the name, street address and telephone number of the arbitrator appointed by Bonneville. The two arbitrators appointed by the Committee and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville.

- (1) If the arbitrators appointed by the Committee and by Bonneville, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville, then within 30 days after the date of the appointment of an arbitrator by Bonneville, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
- (2) If Bonneville fails to appoint an arbitrator within 15 days after receipt of the notice by the Committee referred to in subsection 14(b), then within 30 days after the date of such notice, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
- (3) If, pursuant to either paragraph 14(c)(1) or 14(c)(2), the Committee applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Committee shall give Bonneville written notice of such application within 5 days after the date of filing such application.
- (d) The three arbitrators appointed pursuant to subsections 14(b) and 14(c) shall select by a majority vote an alternative pursuant to subsection 14(g).
- (e) Within 10 days after the appointment of a third arbitrator pursuant to subsection 14(c), the arbitrators shall establish a schedule for submission of written positions by Bonneville and PNGC, respectively.

The arbitrators must establish a schedule for such submissions pursuant to this subsection 14(e) that will allow the arbitration to be concluded, and the decision of the arbitrators rendered pursuant to subsection 14(g), within 120 days following the date of the appointment of the third arbitrator. A copy of any submission by the Committee to the arbitrators pursuant to this section 14 shall be simultaneously served by the Committee on Bonneville, and a copy of any submission by Bonneville to the arbitrators pursuant to this section 14 shall be simultaneously served by Bonneville on each Capacity Owner that has appointed a representative to the Committee. The Committee shall state, in a letter to the arbitrators, as its proposed alternative to each Bonneville proposal in dispute, the recommendation proposed by the Committee pursuant to subsection 13(g) and rejected in whole or in part by Bonneville pursuant to subsection 13(g). Bonneville shall state its position and proposed resolution of the dispute in a letter to the arbitrators. If Bonneville made a proposal in response to such recommendation of the Committee pursuant to subsection 13(g), then such position and proposed resolution shall set forth such proposal, or if Bonneville made no such proposal, then such position and proposed resolution shall set forth the relevant portion of the Operating Plan. If, however, the arbitration concerns an exception pursuant to paragraph 16(f)(3), then the positions and proposed resolutions of Bonneville and the Committee shall be as established pursuant to such subsection. The Committee may then submit a response to Bonneville's letter, and Bonneville may thereafter submit a reply to the Committee's response. Bonneville and the Committee shall have an equal number of days to prepare and serve their replies.

- (f) No submission by either the Committee or Bonneville to the arbitrators pursuant to subsection 14(e) shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Committee or Bonneville, and for good cause shown, the arbitrators may permit any submission by such Party to exceed 50 pages.

- (g) The arbitrators shall select, as between the Committee's recommendation pursuant to subsection 13(e), on the one hand, and the portion of Bonneville's proposed Operating Plan to which the Committee's recommendation pertains or Bonneville's proposal pursuant to subsection 13(g) not accepted by the Committee, on the other, the alternative which
- (1) is consistent with the provisions of this Agreement and
  - (2) (A) in conformity with the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto, would better achieve the desired result consistent with safety, reliability, and cost-benefit or (B) if there are no such generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area, would, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, be reasonably expected to better achieve the desired result consistent with safety, reliability, and cost-benefit.
- (h) In applying the standards set forth in subsection 14(g), the arbitrators shall take into consideration, among other things (a) that Bonneville and PNGC each have responsibilities for service to customers within and without the Pacific Northwest region in accordance with applicable law, (b) that Bonneville and others jointly own the PNW AC Intertie and Bonneville owes contractual obligations to those parties regarding the PNW AC Intertie, (c) that Bonneville must operate, as a practical matter, the PNW AC Intertie in coordination with the operation of the interconnected intertie facilities in California, and (d) that the PNW AC Intertie is a major import-export facility important to the service of loads in and out of the region.
- (i) In any arbitration pursuant to this section 14, the arbitrators shall choose, pursuant to subsection 14(g), only between the alternatives proposed by Bonneville and the Committee and shall have no

authority to resolve such arbitration other than by selecting an alternative proposed by either Bonneville or the Committee.

- (j) Upon selection by the arbitrators of an alternative pursuant to subsection 14(g), then Bonneville shall amend the Operating Plan to cause it to conform to the decision of the arbitrators.
- (k) If the arbitrators have not made a selection of an alternative pursuant to subsection 14(i) before the date on which the Operating Plan becomes effective pursuant to subsection 13(j), then PNGC shall make payments of annual charges pursuant to such Operating Plan. If the arbitrators subsequently select the Committee's alternative, then Bonneville shall, subsequent to amending such Operating Plan pursuant to subsection 14(j), refund to or bill PNGC its pro rata share of the amount of the incremental difference between the costs set forth in such Operating Plan as amended pursuant to subsection 14(j) and 105 percent of the costs set forth in such Operating Plan, prior to its amendment pursuant to subsection 14(j), to the extent that such costs were incurred during the period from the first day of effectiveness of such Operating Plan pursuant to subsection 13(j) to the date of the arbitrators' decision, such refund to be made pursuant to subsection 9(f) and such payment to be made pursuant to subsection 9(b).
- (l) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 14 equal to  $1 + (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay its own expenses related to the arbitration proceeding including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
- (m) Any judgment rendered by a court of competent jurisdiction upon an award made by the arbitrators pursuant to this section 14 may be entered in any court having jurisdiction thereof.

**15. NONBINDING ARBITRATION**

(a) The Initiating Party (as defined in paragraph 15(e)(1)) may, subject to the immediately succeeding sentence, elect by written notice to Responding Party (as defined in paragraph 15(e)(1)) to refer to nonbinding arbitration pursuant to the other provisions of this section 15 the following: (i) if the Initiating Party is the Committee, any recommendation by the Committee, or any portion thereof, concerning any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 and (ii) any other issue, dispute, or controversy regarding the Parties' respective rights and obligations pursuant to this Agreement. The Initiating Party's right pursuant to this subsection 15(a) to arbitrate any recommendation or any issue, dispute or controversy shall be subject to the following limitations:

- (1) the Initiating Party may not arbitrate pursuant to this subsection 15(a): (A) any recommendation with respect to an Operating Plan or any amendment to an Operating Plan or (B) any issue, dispute, or controversy, which recommendation, issue, dispute or controversy may be arbitrated pursuant to subsection 13(i) or 16(f);
- (2) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation not permitted to be arbitrated pursuant to paragraphs 13(i)(1), 13(i)(3), 13(i)(4), and 13(i)(8);
- (3) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning a loss factor or revision to a loss factor set forth in Exhibit E, Part A or Part B pursuant to this Agreement;

- (4) the Committee may not (but the PNGC or Bonneville may) arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning any right or obligation of PNGC pursuant to this Agreement that is not a right or obligation, as the case may be, of each other Capacity Owner under its respective Capacity Ownership Agreement; or
- (5) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operating Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs and forecast End of Term Costs set forth in such Operating Plan, the Committee may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 only to the extent that such actual cost exceeds 105 percent of the forecast for such activity or such project; provided, however, that, without limiting any of PNGC's rights and benefits pursuant to section 16(f), no Initiating Party may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6



and 7 if such actual cost is less than 105 percent of the forecast for such activity or such project; and

- (6) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any issue, dispute, or controversy (A) concerning matters of ratemaking (for purposes of this subsection 15(a), the term "ratemaking" shall mean the determination of matters appropriately determined pursuant to section 7(i) of the Regional Act, including (i) Bonneville's revenue requirements (including without limitation Bonneville's depreciation and repayment standards and planned net revenues for risk, but excluding program level issues determined in the Federal budget process), (ii) Bonneville's cost of service analysis (including functionalization, segmentation, and allocation of costs contained in such analysis, but excluding any allocation of costs contemplated in Exhibit I), (iii) Bonneville's rate design, and (iv) any related environmental analysis of proposed rates; (B) concerning a final action of Bonneville, which final action is not itself performance of any obligation of Bonneville or Bonneville's Administrator under this Agreement; or (C) concerning, or requiring the decision of, a matter not arising under this Agreement or the other Capacity Ownership Agreements.
- (b) Except as otherwise provided in paragraph 15(a)(4), all arbitrations pursuant to this section 15 shall be between Bonneville and the Committee.
- (c) A copy of any submission (including, without limitation, any statement of position or any brief) by the Initiating Party or the Responding Party to the arbitrators pursuant to this section 15 shall be simultaneously served by such party on the Responding Party or Initiating Party, respectively. No submission by either the Initiating Party or the Responding Party to the arbitrators shall be more than 50 pages in length (not including exhibits). If requested in writing by

either the Initiating Party or the Responding Party, and for good cause shown, the arbitrators may permit any submission by such party to exceed 50 pages.

- (d) With respect to any arbitration pursuant to this section 15 of any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) Only the Committee may initiate arbitration with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7. The Committee may initiate nonbinding arbitration pursuant to this section 15 by taking the following actions:
- (A) an affirmative vote to initiate arbitration pursuant to this section 15 by the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
- (B) either of the following:
- (i) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to this section 15 within the applicable time period set forth in subsection 13(h); or
- (ii) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity

Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subparagraph 15(d)(1)(B) shall (x) indicate that such vote has been taken and (y) set forth in detail the matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (2) The respective rights and obligations of the Committee and of Bonneville with respect to arbitration pursuant to this subsection 15(d), unless otherwise provided in this subsection 15(d), shall be as set forth in subsections 14(d) through 14(l).
  
- (e) With respect to any arbitration pursuant to this section 15 of any issue, dispute, or controversy other than with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
  - (1) The party (which term, for purposes of this subsection 15(e), shall refer to Bonneville, on the one hand, and to the Committee or PNGC, on the other) initiating arbitration (Initiating Party) shall initiate arbitration pursuant to this section 15 by serving written notice on the other party (Responding Party) of its initiation of arbitration. If the Committee is the party initiating arbitration, the Committee, in addition to serving such notice, shall initiate such arbitration by an affirmative vote to do so of at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one. The Committee shall indicate that such vote has been taken in such notice to Bonneville. Any such notice by an Initiating

Party shall set forth in detail the following: (A) the issue, dispute, or controversy to be arbitrated and the Initiating Party's position regarding such issue, dispute, or controversy; (B) the relief sought by the Initiating Party; and (C) the name, street address, and telephone number of the arbitrator appointed by the Initiating Party. The Responding Party shall, within 15 days after receipt of the notice by the Initiating Party referred to in this subsection 15(e), appoint a second arbitrator and provide written notice to the Initiating Party and to the arbitrator appointed by the Initiating Party of the name, street address and telephone number of the arbitrator appointed by the Responding Party. The arbitrators appointed by the Initiating Party and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party.

- (A) If the arbitrators appointed by the Initiating Party and by the Responding Party, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party, then within 30 days after the date of the appointment of an arbitrator by the Responding Party the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
- (B) If the Responding Party fails to appoint an arbitrator within 15 days after receipt of the notice by the Initiating Party referred to in paragraph 15(e)(1), then within 30 days after the date of such notice the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
- (C) If, pursuant to either subparagraph 15(e)(1)(A) or 15(e)(1)(B), the Initiating Party applies to the Chief

Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Initiating Party shall give the Responding Party written notice of such application within one day after the date of filing such application.

- (2) The three arbitrators appointed pursuant to paragraph 15(e)(1) shall decide any issue, dispute, or controversy by majority vote.
- (3) Within 20 days after the appointment of a third arbitrator pursuant to paragraph 15(e)(1) with respect to any arbitration pursuant to this subsection 15(e), the arbitrators shall establish a schedule for the completion of such arbitration. The first day pursuant to such schedule shall be hereafter referred to in this subsection 15(e) as the "Arbitration Commencement Date."
- (4) No later than 15 days after the Arbitration Commencement Date, the Initiating Party may make a single request in writing to the Responding Party for documentation, data, and information relevant to or reasonably necessary to support the Initiating Party's position communicated to the Responding Party pursuant to paragraph 15(e)(1). Such single request may contain multiple parts. The Initiating Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information pursuant to this paragraph.
- (5) The Responding Party shall have 20 days from the date it receives the request from the Initiating Party pursuant to paragraph 15(e)(4) to provide the documentation, data, and information requested; provided, however, that the Responding Party shall be under no obligation pursuant to this paragraph 15(e)(5) (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the

Committee documentation, data, or information that Bonneville has previously provided to the Initiating Party or (D) if Bonneville is the Responding Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (6) No later than 15 days after the Arbitration Commencement Date, the Responding Party may make a single request in writing to the Initiating Party for documentation, data and information relevant to Initiating Party's position communicated to the Responding Party pursuant to subsection 15(e)(4). Such single request may contain multiple parts. The Responding Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data and information pursuant to this paragraph.
- (7) The Initiating Party shall have 20 days from the date it receives the request from the Responding Party pursuant to paragraph 15(e)(6) to provide the documentation, data and information requested; provided, however, that the Initiating Party shall be under no obligation pursuant to this paragraph 15(e)(7) (A) to create additional documentation, data, or information, (B) to provide documentation, data or information that is not readily available to it, (C) to provide to the Responding Party documentation, data, or information that the Initiating Party has previously provided to the Responding Party or (D) if Bonneville is the Initiating Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of

Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (8) For purposes of this subsection 15(e), each of the Initiating Party and the Responding Party shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests by it for, documentation, data, and information and responses to such requests.
- (9) Within 65 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may state in reasonable detail its position regarding any issue, dispute or controversy to be arbitrated pursuant to this subsection 15(e) in a letter to the arbitrators and to the other party to the arbitration of such issue, dispute, or controversy. Within 85 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may submit a letter to the arbitrators and to the other party responding to the letter that the other submitted to the arbitrators pursuant to the immediately preceding sentence.
- (10) The arbitrators shall resolve any issue, dispute, or controversy pursuant to this subsection 15(e) by deciding (taking into consideration, among other things, any letter submitted by the Initiating Party or the Responding Party with respect to such issue, dispute, or controversy) whether the position of the Initiating Party or the position of the Responding Party regarding the action taken or proposed to be taken by the Responding Party conforms more closely with the standard for such action set forth in this Agreement. The arbitrators shall have no authority to fashion a resolution of such arbitration other than pursuant to this paragraph 15(e)(10).

- (f) Any selection by the arbitrators of an alternative pursuant to subsection 15(d) and any decision by the arbitrators pursuant to subsection 15(e) shall be reported by the Initiating Party to the Bonneville Administrator (Administrator) for review within 30 days after such selection or decision is made. The Administrator shall either accept or reject in writing such selection or decision. If the Administrator fails to either accept or reject such selection or decision, as the case may be, within 90 days after such selection or decision is made, such selection or decision, as the case may be, shall be deemed to be accepted by the Administrator.
  
- (g) If the Administrator accepts any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e), such selection or decision shall become binding upon PNGC and Bonneville at the time of its acceptance.
  
- (h) The Administrator may reject any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e) only for one or more of the following reasons:
  - (1) the arbitrators did not follow the arbitration procedures set forth in this section 15;
  - (2) the arbitrators decided a matter that is not a matter arising under this Agreement as set forth in paragraph 15(a)(6);
  - (3) the arbitrators did not completely apply the appropriate standard for arbitration pursuant to this section 15;
  - (4) the arbitrators granted relief in contravention of this Agreement;
  - (5) the arbitrators' decision is not supported by substantial, competent evidence; or



- (6) implementation of the arbitrators' decision would cause Bonneville to violate a statutory obligation of Bonneville's or would cause Bonneville to breach a contractual obligation not in contravention of this Agreement.
- (i) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 15 equal to  $1 \div (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay for its own expenses related to the arbitration proceeding, including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
- (j) If the Initiating Party elects to arbitrate any issue, dispute, or controversy pursuant to this section 15, the Initiating Party must initiate arbitration of such issue, dispute, or controversy within one year following the occurrence of the event giving rise to such issue, dispute, or controversy. Failure of the Initiating Party to initiate arbitration of any such issue, dispute, or controversy within such one-year period shall constitute a waiver of the Initiating Party's right to arbitrate such issue, dispute, or controversy pursuant to this section 15.

## 16. **AUDIT RIGHTS**

- (a) The Committee shall have the right to perform an audit of Bonneville's books, records, and documents used in or relating to the determination of the Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to the Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(2)(B).

- (b) The Committee shall have the right to perform an audit of Bonneville's books, records and documents used in or relating to the determination of any Revised Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to any Revised Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(3)(B).
- (c) The Committee shall have the right to audit Bonneville's books, records, and documents (i) used in or relating to the determination of any charge (including, without limitation, any MFU count made pursuant to section I.A of Exhibit I) billed to PNGC pursuant to paragraph 9(b)(2) and subsection 9(c), or (ii) used in or relating to any billing or refund with respect to any such charge. Such audit shall be performed within 36 months after the date of Bonneville's bill or refund voucher for such charge rendered by Bonneville to PNGC pursuant to paragraph 9(b)(2) or subsection 9(c), as the case may be.
- (d) Bonneville shall not be responsible to pay any of the expenses incurred by any of the Capacity Owners in performing any audit pursuant to this section 16. Bonneville shall not directly charge PNGC or any Capacity Owner other than PNGC for Bonneville's costs incurred by Bonneville with respect to any audit pursuant to this section 16 unless Bonneville develops a general practice of charging, through direct charges, each of its customers for such costs incurred by Bonneville in connection with audits undertaken pursuant to those customers' respective contracts with Bonneville.
- (e) After completing any audit specified above, the Committee shall promptly provide to Bonneville a written report of the results of such audit. If such audit report includes any exception taken as a result of such audit and Bonneville agrees with such exception, Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such audit exception,

- (1) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to PNGC a revised bill or refund voucher pursuant to paragraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
- (2) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and either (A) render to PNGC a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (B) cause to be refunded to PNGC as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by PNGC's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this subsection 16(e) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such audit report is received by Bonneville to (but excluding) the date on which such amount is refunded to PNGC.

- (f) If an audit report provided to Bonneville by PNGC pursuant to subsection 16(e) includes any exception taken as a result of such audit and Bonneville does not agree with such exception, then the following shall apply:
  - (1) Bonneville may, within 30 days following its receipt of such audit report, propose to the Committee a resolution of any inconsistency noted in any exception taken as a result of such audit;

- (2) If the Committee accepts such resolution proposed by Bonneville, then Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such resolution,
- (A) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to PNGC a revised bill or refund voucher pursuant to subparagraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
  - (B) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and shall either (i) render to PNGC a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (ii) cause to be refunded to PNGC as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by PNGC's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this paragraph 16(f)(2) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such resolution is accepted by the Committee to (but excluding) the date on which such amount is refunded to PNGC; and

- (3) If the Committee does not accept such resolution, if any, proposed by Bonneville with respect to any such exception, or if

Bonneville does not propose any such resolution, then the Committee

- (A) shall have the right to arbitrate, pursuant to section 14, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to subsection 13(i); and
- (B) shall have the right to arbitrate, pursuant to section 15, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to section 15.

The Committee must refer to arbitration pursuant to subparagraph 16(f)(3)(A) or 16(f)(3)(B) any cost to which exception is taken as a result of any audit within eight months after the date the Committee commences such audit. Failure of the Committee to elect to so refer to arbitration any cost within such eight-month period shall be deemed to constitute waiver by the Committee of any right pursuant to this section 16 to arbitrate such cost.

- (g) PNGC shall have the right to participate in any audit pursuant to this section 16 only by acting through the Committee. If PNGC chooses not to participate in any audit undertaken by the Committee, then PNGC shall accept the findings of the Committee with respect to such audit and any resolution by the Committee and Bonneville of any inconsistency noted in any exception taken as a result of such audit.
- (h) Any audits undertaken by the Committee shall be upon reasonable notice to Bonneville and at reasonable times and shall commence no more frequently than once in any 24 consecutive months. The audit rights provided in this section shall not be construed to permit a general audit of Bonneville's books, records, and documents. Audits shall be in conformance with generally accepted auditing standards. Prior to and for the duration of any audit, Bonneville shall retain all pertinent books, records, and documents prepared in the normal

course of business. After commencement of an audit pursuant to subsection 16(a), 16(b), or 16(c), the Committee may request and Bonneville shall promptly provide reasonably available supporting documentation for any cost or charge subject to audit. If the Committee fails to commence an audit pursuant to subsection 16(a), 16(b), or 16(c) within the time periods set forth in subsection 16(a), 16(b), or 16(c), such failure shall constitute waiver by PNGC of any right pursuant to this section 16 to arbitrate any charge or refund billed or refunded by Bonneville.

- (i) If PNGC is operating pursuant to paragraph 3(b)(1), Bonneville shall have the right, at its own expense, to review PNGC's books, records, and documents that directly pertain to the revenue reportable in PNGC's accounting system where revenues received for wheeling for other entities would be booked for the purpose of verifying compliance with paragraph 3(b)(1). Bonneville shall have the right to perform such audit no more frequently than once every 36 months.

**17. PROTECTED AREAS**

PNGC shall not use its Scheduling Share for transmission of power on the PNW AC Intertie from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by Bonneville unless PNGC is required by regulatory authority to purchase or provide transmission for the output of such project or unless Bonneville receives sufficient demonstration that a particular project would provide benefits to Bonneville's existing or planned fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program. The Parties agree that System Sales shall not be taken into consideration in any determination of whether PNGC has used its Scheduling Share for transmission of power on the PNW AC Intertie from the hydroelectric projects referred to in the immediately preceding sentence. For purposes of this section 17, "System Sale" means any sale of power or energy to PNGC or by a seller of power or energy, which power or energy is not resource-specific and is delivered to PNGC at a point that connects one or more resources or transmission systems.

**18. ESTABLISHMENT AND MAINTENANCE OF RATES AND RELIEF FROM REGULATORY ACTION**

- (a) Bonneville shall use good faith efforts to maintain in effect such of the following rates that has been approved by FERC on an interim or final basis, during the rate approval period established by FERC for such rate:
- (1) any rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date;
  - (2) the Initial Successor Rate;
  - (3) the Alternative Successor Rate; and
  - (4) the Bonneville Successor Rate.
- (b) If Bonneville's Administrator submits to FERC a rate that is different from that set forth in Exhibit B, Part A and Part B, on the Effective Date, as the first rate proposed by Bonneville (Initial Successor Rate) to replace the AC-93 rate set forth in Exhibit A or that is for a rate approval period which is less than the remainder of the Term following the expiration of the AC-93 rate, PNGC may, within 90 days after Bonneville submits the Initial Successor Rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:
- (1) PNGC may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
  - (2) PNGC may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by

PNGC to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:

- (A) This Agreement shall terminate upon the date Bonneville receives PNGC's notification to terminate this Agreement pursuant to this subsection 18(b) except for those rights and obligations set forth in this paragraph 18(b)(2).
- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after PNGC has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of PNGC's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + I = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PNGC to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(b).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment,



Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

I = Interest on A - ((B/540) X A), accruing from (and including) the date of Bonneville's receipt of PNGC's Initial Lump Sum Payment to (but excluding) the date on which Bonneville receives PNGC' notification to terminate this Agreement pursuant to this subsection 18(a), at the 5-year Treasury note rate in effect on the date on which Bonneville receives PNGC's Initial Lump Sum Payment.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(b)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(b)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(b)(2)(B), Bonneville may accelerate payment to PNGC of the amount of the Refunded Lump Sum Payment.

If PNGC elects to proceed under this paragraph 18(b)(2), Bonneville shall not develop a rate or charge that would inequitably allocate to PNGC and Capacity Owners other than PNGC, or to any of them, the cost to Bonneville of the

Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from PNGC or any Capacity Owner other than PNGC.

- (c) If FERC approves the Initial Successor Rate, the Alternative Successor Rate (as defined in subsection 18(d)), or the Bonneville Successor Rate (as defined in subsection 18(d)) for a term less than the remainder of the Term following the expiration of the AC-93 rate, and if Bonneville's Administrator thereafter submits to FERC a rate (Replacement Rate) that is different from the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis) or that is for a rate approval period which is less than the remainder of the Term following the expiration of the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis), PNGC may, within 90 days after Bonneville submits such rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:
- (1) PNGC may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
  - (2) PNGC may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PNGC to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:
    - (A) This Agreement shall terminate upon the date Bonneville receives PNGC's notification to terminate this Agreement pursuant to this subsection 18(c) except

for those rights and obligations set forth in this paragraph 18(c)(2).

- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after PNGC has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of PNGC's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + R = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PNGC to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement.

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

R = 2.5 times the amount paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the immediately preceding fiscal year times the ratio of (a) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the

first fiscal year during the proposed rate approval period pursuant to the rate submitted by Bonneville to FERC to replace the immediately preceding annual costs rate over (b) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the same fiscal year were the immediately preceding annual costs rate to remain in effect; provided, however, that the ratio of (a) over (b) shall in no event be less than one for purposes of this subsection.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(c)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(c)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(c)(2)(B), Bonneville may accelerate payment to PNGC of the amount of Refunded Lump Sum Payment.

If PNGC elects to proceed under this paragraph 18(c)(2), Bonneville shall not develop a special rate or charge that would inequitably allocate to PNGC and Capacity Owners other than PNGC, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because

it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from PNGC or any Capacity Owner other than PNGC.

The terms of this subsection 18(c) shall be effective through December 31, 2040.

- (d) If (i) FERC remands or approves a rate which materially differs from the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, or (ii) FERC grants final approval to a rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date, or to the Initial Successor Rate for a rate approval period of less than the remainder of the Term following the expiration of the AC-93 rate, or (iii) FERC remands or disapproves the Initial Successor Rate, then in any such event Bonneville, PNGC, and Capacity Owners other than PNGC shall use good faith efforts to develop an alternative successor rate (Alternative Successor Rate) which would place PNGC in substantially the same position with respect to PNGC's rights and obligations under this Agreement as if the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, had been approved by FERC for the remainder of the Term following the expiration of the AC-93 rate. Bonneville, PNGC, and Capacity Owners other than PNGC shall use good faith efforts to reach agreement on an Alternative Successor Rate within 6 months after the date of the FERC order regarding the Initial Successor Rate contemplated in this subsection 18(d) or within the time period established in such FERC order, whichever is earlier.
- (1) If Bonneville, PNGC, and Capacity Owners other than PNGC reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, then Bonneville shall, subject to section 7(i) of the Regional Act, submit such Alternative Successor Rate to FERC for approval and confirmation.

- (2) If Bonneville, PNGC, and Capacity Owners other than PNGC do not reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, Bonneville shall develop a rate, which, among other things, in Bonneville's judgment, protects the rights and obligations of PNGC and Capacity Owners other than PNGC and, subject to section 7(i) of the Regional Act, shall submit such rate (Bonneville Successor Rate) to FERC for approval and confirmation.

Nothing in this subsection 18(d) shall limit or otherwise affect any provisions of subsection 18(b) or 18(c).

- (e) If Bonneville, PNGC, and Capacity Owners other than PNGC are unable to agree upon an Alternative Successor Rate pursuant to subsection 18(d), or if FERC approves the Alternative Successor Rate for a period of less than 15 years or with terms and conditions that differ from the terms and conditions of the Alternative Successor Rate, or if FERC remands the Alternative Successor Rate, or if FERC approves the Bonneville Successor Rate, PNGC may elect, within 6 months of any of the foregoing events, to terminate this Agreement and execute a long-term contract with Bonneville for firm wheeling on the PNW-PSW Intertie for a term not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to PNGC's Capacity Ownership Share, pursuant to subsection 18(f).
- (f) Should PNGC elect to proceed pursuant to paragraph 18(b)(1) or 18(c)(1) or subsection 18(e), the Parties shall take the following steps:
  - (1) PNGC shall provide Bonneville with written notification of its election to terminate this Agreement and with a written request for a long-term contract for firm wheeling on the PNW-PSW Intertie for a period not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an

amount of power on the PNW-PSW Intertie up to PNGC's Capacity Ownership Share.

- (2) As soon as practicable after receipt by Bonneville of the written notice sent pursuant to paragraph 18(f)(1), Bonneville shall offer to PNGC a long-term contract for firm wheeling on the PNW-PSW Intertie of an amount of power equal to the amount of power specified in PNGC's written request pursuant to paragraph 18(f)(1), such offered contract to contain other terms and conditions substantially similar to those then being offered by Bonneville to its other firm wheeling customers for transactions on the PNW-PSW Intertie.

The termination date of this Agreement shall be the same date as the effective date of the long-term contract for firm wheeling referred to in this paragraph 18(f)(2), and such date shall in any event be no more than 6 months after Bonneville's receipt of PNGC's notification pursuant to paragraph 18(f)(1).

- (3) The long-term contract for firm wheeling offered to PNGC pursuant to paragraph 18(f)(2) shall also contain provisions which:
- (A) Require Bonneville to credit or pay (any such payment to be made pursuant to paragraph 9(f)(4)), in equal monthly amounts during the term of such long-term contract for firm wheeling, against the amount payable by PNGC to Bonneville pursuant to such long-term wheeling agreement an amount equal to the "Credited Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) = \text{Credited Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PNGC to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(e).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

(B) Require Bonneville, subject to the immediately succeeding sentence, to credit or pay interest on the Credited Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest to be credited or paid pursuant to this provision shall be credited or paid by Bonneville on the amount of each monthly amount of the Credited Lump Sum Payment to be credited or paid by Bonneville pursuant to the provision set forth in subparagraph 18(f)(3)(A).

(C) Permit Bonneville to accelerate payment to PNGC of the amount of Credited Lump Sum Payment which remains uncredited at any time during the term of such long-term contract for firm wheeling.

(g) PNGC's right to terminate this Agreement pursuant to subsections 18(d) through 18(f) is a one-time only right that must be exercised after FERC action pursuant to subsection 18(d). If PNGC fails to terminate the Agreement pursuant to subsection 18(e) as prescribed



therein as a result of FERC action, PNGC shall have no future rights to terminate the Agreement under this section 18 as a result of FERC action.

- (h) Bonneville shall use best efforts to establish and maintain in effect the AC-93 rate, set forth in Exhibit A, during the remainder of the Term, but only until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), that is confirmed and approved by FERC on an interim or final basis, becomes effective. If FERC does not confirm and approve on a final basis the AC-93 rate for a rate approval period of sufficient duration so that the AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or such other rate, becomes effective, then upon expiration of the rate approval period of such AC-93 rate, Bonneville shall submit to FERC a rate based on the methodology used to determine the AC-93 rate (revised AC-93 rate) and shall use best efforts to obtain a rate approval period for the revised AC-93 rate of sufficient duration so that the revised AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), becomes effective. If, at any time during the Term, FERC does not confirm and approve on an interim or final basis the AC-93 rate or revised AC-93 rate for any reason other than the duration of the rate approval period, Bonneville and PNGC shall use best efforts to develop a rate that would replace the AC-93 rate or revised AC-93 rate, and Bonneville shall submit such rate to FERC, pursuant to section 7(i) of the Regional Act, for confirmation and approval if such rate is agreed to by Bonneville, PNGC and Capacity Owners other than PNGC. If Bonneville and PNGC do not succeed in developing such rate, Bonneville shall submit to FERC, pursuant to section 7(i) of the Regional Act, a rate which in Bonneville's judgment recovers Bonneville's costs. Bonneville shall bill PNGC, and PNGC shall pay Bonneville, in accordance with the AC-93 rate or, if FERC does not confirm and approve on an interim or final basis the AC-93 rate, the rate confirmed and approved by FERC on an interim or final basis. Bonneville shall revise Exhibit A so that it contains, at a given time,

the AC-93 or other rate confirmed and approved by FERC on an interim or final basis.

**19. EXHIBITS**

- (a) Exhibits A through J attached to this Agreement are by this reference made a part of this Agreement. In the event of a conflict between any provision in Exhibits A through J and the provisions of sections 1 through 23 of this Agreement, the provisions of sections 1 through 23 of this Agreement shall prevail.
- (b) Bonneville shall revise Exhibit A pursuant to subsections 18(g) and 18(h) and this subsection 19(b). The rate schedules attached hereto as Exhibit A have been conditionally or finally confirmed by FERC. If the final rate schedules which are approved by FERC are an amendment or modification of the initial rate schedules, the applicable amended or modified rate schedules and associated GTRSPs shall be attached to and made part of this Agreement effective as of the date specified in FERC's approval. The rate schedules and GTRSPs included in Exhibit A shall be replaced by successor rate schedules and provisions in accordance with the provisions of section 7(i) of the Regional Act and FERC rules.
- (c) Upon interim or final approval by FERC of any rate submitted to FERC pursuant to subsections 18(a) through 18(g), Bonneville shall revise Exhibit B so that Exhibit B contains such rate approved by FERC as contemplated in this subsection 19(c). For purposes of this Agreement, such rate shall be effective as of the date of effectiveness specified in FERC's approval of such rate. Subject to the provisions of subsections 18(a) through 18(g), the rate schedule set forth in Exhibit B, Part A and Part B, on the Effective Date, shall be replaced by successor rate schedules and provisions pursuant to section 7(i) of the Northwest Power Act and applicable FERC rules.
- (d) Bonneville shall revise or modify Exhibit C from time to time to reflect changes hereafter agreed to in writing by the Parties in PNGC's

Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share.

- (e) Bonneville shall revise Exhibit D pursuant to subsection 9(a). Revision or modification of Exhibit D shall not require an executed amendment or revision to this Agreement.
- (f) Not more frequently than annually, Bonneville shall review and, as appropriate, revise Exhibit E, Part A, in accordance with Bonneville's standard methodology and formula for calculation of average losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie. Such methodology and formula are intended to forecast average annual actual losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie Operational Transfer Capability. Any changes to the loss methodology or formula, other than numerical values, shall be made only after consultation with the Committee. During such consultation, Bonneville shall provide to the Committee material pertinent to such changes to the loss methodology or formula. Upon conclusion of any review of the loss factor in Exhibit E, Part A, Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan pursuant to section 13. If the Committee pursues arbitration pursuant to subsection 10(b) and section 14, Bonneville shall revise Exhibit E, Part A, to reflect the selection of the arbitrators pursuant to subsection 14(j).
- (g) Bonneville shall revise the loss factor in Exhibit E, Part B, as necessary to equal the same factor for average losses as Bonneville generally applies to transmission over Bonneville's share of the PNW-PSW Intertie. Revision of Exhibit E, Part B, shall not require an executed amendment or revision to this Agreement.
- (h) Bonneville shall revise Exhibit F as appropriate to reflect the facilities in Bonneville's PNW AC Intertie. Revision or modification of Exhibit F shall not require an executed amendment or revision to this Agreement.

- (i) Bonneville shall revise Exhibit G as appropriate to reflect the complete list of all of the Capacity Owners and their respective Capacity Ownership Shares and Capacity Ownership Percentages from time to time pursuant to this Agreement.
- (j) Bonneville shall revise Exhibit H as appropriate to reflect all provisions required by statute or Executive Order. Revision or modification of Exhibit H shall not require an executed amendment or revision to this Agreement.
- (k) Bonneville shall revise Exhibit I to reflect changes as agreed to in writing by PNGC and Capacity Owners other than PNGC.
- (l) Bonneville shall revise Exhibit J as mutually agreed to in writing by the Parties.

**20. RULES OF LAW**

- (a) Bonneville and PNGC agree that each fully participated in the drafting of each provision of this Agreement. The rule of law interpreting ambiguities against the drafting Party shall not be applicable to or utilized in resolving any dispute over the meaning or intent of this Agreement or any of its provisions.
- (b) This Agreement shall not be construed to establish a partnership, association, agency relationship, joint venture, or trust. Neither Party shall be under the control of or shall be or represent itself as, the agent of, or have a right or power to bind, the other Party without the other's express written consent, except as provided in this Agreement.
- (c) All applicable law is incorporated in and made part of this Agreement.

21. **NOTICES**

- (a) Unless the Agreement requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be served, given, or made if delivered in person or sent by acknowledged delivery, or sent by registered or certified mail, postage prepaid, to the persons addressed as set forth below:

**To Bonneville:**

Group Vice President for Marketing, Conservation and Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232

**To Puget:**

Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515

**To Seattle:**

Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101

**To PNGC:**

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232

To Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201

To Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411

- (b) Either Party may, by written notice to the other Party pursuant to subsection 21(a), change the address set forth in subsection 21(a) for the notifying Party.
- (c) All notices pursuant to this Agreement shall be effective on the date of receipt.

**22. WAIVER**

Any waiver at any time by a Party of its rights with respect to any matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent or other matter. Except as otherwise provided herein or as agreed in writing by the Parties, no provision in this Agreement may be waived except as documented or confirmed in writing.

**23. MISCELLANEOUS**

**(a) Effect of Section Headings**

Section headings and subheadings appearing in this Agreement are inserted for convenience only and shall not be construed as interpretations of provisions of this Agreement.

(b) **Amendments**

Except as may be expressly otherwise provided in this Agreement, this Agreement may be amended only with the express written consent of both of the Parties, and no provision of this Agreement shall be varied or contradicted by any oral agreement, course of dealing or performance or any other matter not hereafter set forth in a written agreement signed by both of the Parties.

(c) **Entire Agreement**

This Agreement constitutes, on and as of the date hereof, the entire agreement of the Parties with respect to the subject matter of this Agreement, and all prior understandings or agreements, whether written or oral, between the Parties with respect to the subject matter of this Agreement are hereby superseded in their entireties.

(d) **No Third Party Beneficiaries**

There are no third party beneficiaries of this Agreement. This Agreement shall not be construed to create rights in, or to grant remedies to, any third party as a beneficiary of this Agreement or of any duty, obligation, or undertaking established herein.

(e) **Regulatory Approvals**

Each Party shall use its best efforts to obtain and maintain in effect regulatory approvals that are necessary to permit such Party to perform its obligations under this Agreement in accordance with its terms and conditions. Neither Party shall oppose in any way or seek to alter or amend the terms and conditions of this Agreement by application to or participation in any application of any regulatory authority or court having jurisdiction. PNGC shall not oppose in any way or seek to alter or amend the terms or conditions of the annual costs rate set forth in Exhibit B, the CO-94 rate, the AC-93 rate, or

any rate described in section 18 that is agreed to by the Parties subsequent to each entering into this Agreement, in any proceeding pursuant to section 7 of the Pacific Northwest Electric Power Planning and Conservation Act before FERC or in any court of competent jurisdiction.

**(f) Other Capacity Ownership Agreements**

If Bonneville offers to enter into (i) a Capacity Ownership Agreement with any other Capacity Owner or (ii) any written amendment of any Capacity Ownership Agreement (other than this Agreement), then Bonneville shall offer to PNGC an amendment of this Agreement that contains the terms and conditions of such Capacity Ownership Agreement with such other Capacity Owner or of such written amendment, as the case may be. Bonneville shall advise, and use reasonable efforts to consult with, PNGC during the development or consideration of any offer to any Capacity Owner other than PNGC to enter into a Capacity Ownership Agreement or any amendment of such agreement.

**(g) Singular and Plural Forms**

For purposes of interpreting and construing this Agreement, the singular form of a word shall include its plural and the plural form of a word shall include its singular, unless otherwise expressly provided by this Agreement.

**(h) Performance Pending Dispute**

Except as otherwise expressly provided in this Agreement, pending resolution of any dispute, issue, or controversy arising under this Agreement, the Parties shall each continue performance of their respective obligations pursuant to this Agreement.



(i) **Time Periods**

For purposes of calculating any time period prescribed by this Agreement, if the last day of the time period falls on a day that is not a Working Day, then the last day of the time period shall be the first Working Day following such day as would otherwise be the last day of the time period.

(j) **Double Counting**

In developing rates or charges under section 7 of the Pacific Northwest Electric Power Planning and Conservation Act for any rate period, Bonneville shall not set rates or charges that recover, more than once, the costs associated with capital projects that are paid or forecast to be paid under the CO-94 rate and the AC-93 rate and annual costs rate set forth in Exhibit B, or the remaining Bonneville's PNW AC Intertie costs forecast to be paid under the AC-93 rate and annual costs rate set forth in Exhibit B. Bonneville's forecast of revenues chargeable under the CO-94 rate, AC-93 rate, and annual costs rate set forth in Exhibit B shall be based on the best available information, including information provided pursuant to section 13 of this Agreement.

In the event Bonneville proposes any wheeling rate for transmission service on Bonneville's main grid that includes costs of the PNW AC Intertie, such proposed rate shall include a credit or other mechanism that ensures that PNGC is not charged any of the PNW AC Intertie costs for deliveries of power that utilize up to the PNGC's Capacity Ownership Share, as that term is defined in this Agreement.

(k) **Committee Action**

Each of the Parties agrees that to the extent it is provided in sections 13, 14, and 16 that the Committee shall take any action or shall make any decision, such action or decision shall be taken or made, as the case may be, by the Committee, and not by PNGC acting individually.

(l) **Fiscal Year**

For purposes of this Agreement, the term "fiscal year" shall mean Bonneville's fiscal year.

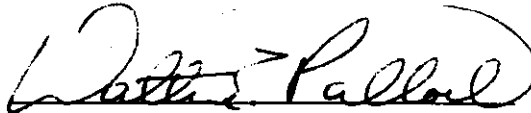
(m) **Rights and Remedies Cumulative**

All rights and remedies of either Party under this Agreement and at law and in equity shall be cumulative and not mutually exclusive and the exercise of one right or remedy shall not be deemed a waiver of any other right or remedy. *Nothing contained in any provision of this Agreement shall be construed to limit or exclude any right or remedy of either Party (arising on account of the breach or default by the other Party or otherwise) now or hereafter existing under any other provision of this Agreement, at law or in equity.*

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

/s/ WALTER E. POLLOCK  
Group Vice President for Marketing,  
Conservation and Production

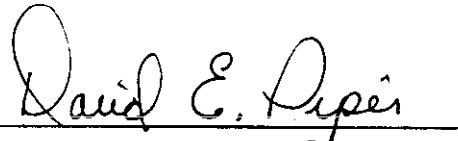
By   
Group Vice President for Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

September 27, 1994

Date September 27, 1994

Pacific Northwest Generating Cooperative

By 

/s/ DAVID E. PIPER

Name DAVID E. PIPER  
(Print/Type)

Title EXEC. VICE PRESIDENT

Executive Vice President

Date 9/26/94

September 26, 1994

Effective Date \_\_\_\_\_

Exhibit A, Page 1 of 1  
Contract No. DE-MS79-94BP94523  
Pacific Northwest Generating Cooperative  
Effective on the Effective Date

**CO-94, AC-93, IS-93 Rate Schedules and General Transmission  
Rate Schedule Provisions**

**Schedule CO-94  
CAPACITY OWNERSHIP RATE SCHEDULE**

**Section I. Availability**

This schedule applies to all agreements which provide life-of-facilities capacity rights to non-Federal participants (Capacity Owners) in 725 MW of Bonneville's PNW AC Intertie and any upgrades thereto. Service under this schedule is subject to Bonneville's General Transmission Rate Schedule Provisions.

**Section II. Rate**

The charge for capital and related costs for non-Federal capacity ownership in Bonneville's PNW AC Intertie shall be determined by the methodologies set out in Section III below.

**Section III. Determination of Rate**

**A. Capacity Ownership Price**

The charge for capacity ownership in Bonneville's PNW AC Intertie shall be the Capacity Ownership Share of the actual capital and related costs of facilities as determined by the formula shown below. The Capacity Ownership Share shall be determined pursuant to the Capacity Ownership agreement.

$$\frac{(A - B) + C + D}{E} = \text{Capacity Ownership Price in } \$/\text{kW}$$

Capacity Ownership Price in \$/kW x number of kW contracted for by Capacity Owner = Capacity Owner's payment to Bonneville

Where:

**A =** Bonneville's cost of new facilities for the Third AC Intertie, which increased the rated transfer capability of the PNW AC Intertie by approximately 1600 MW, is the construction costs (including direct, indirect and overhead costs) of the facilities associated with the Third AC Intertie System Reinforcements and the Alvey-Meridian

Transmission Line ( also known as Eugene-Medford 500-kV Transmission Line), referred to jointly as the Third AC Intertie Project.

- B = Bonneville's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project, which includes a portion of the construction costs (including direct, indirect and overhead costs) associated with the Third AC Intertie System Reinforcement.
- A-B = The cost of new facilities for the second 800 MW increment of the 1600 MW Third AC Intertie Project (presented in Exhibit C of the Capacity Ownership agreement).
- C = Allowance for Funds Used During Construction (AFUDC) constitutes interest on the funds used for the Third AC Intertie Project while it was under construction. AFUDC is calculated and capitalized consistent with FERC requirements as described in FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions, 3.A(17). The AFUDC applies to that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.
- D = Book value of existing Bonneville support facilities that are dedicated to the PNW AC Intertie equal to \$19,100,000.
- E = 725,000 kW, which equals Bonneville's share of the second 800 MW of the Third AC Intertie.

**B. PNW AC Intertie Upgrade Price**

The charge for upgrades to Bonneville's PNW AC Intertie facilities that occur after December 1993, and which result in an increase of rated transfer capability, shall be the Capacity Ownership Share of the capital and related costs of the upgrade. The Capacity Ownership Share of any upgrades shall be determined pursuant to the Capacity Ownership agreement. The capital costs shall consist of the construction costs (including direct, indirect and overhead costs) and AFUDC (as described in Section III.A. above) of the facilities associated with such upgrades.

#### **Section IV. Adjustments and Special Provisions**

##### **A. Initial Lump Sum Payment**

Capacity Owners shall make an initial, lump sum payment of an estimate of the Capacity Ownership Price equal to \$215/kW pursuant to the Capacity Ownership agreement.

##### **B. Adjustment to Reflect Actual Construction Costs**

Approximately December 1995 or as soon as practicable thereafter, the Capacity Owner's initial lump sum payment shall be adjusted to reflect the difference between the actual and the estimated Capacity Ownership Price. The actual Capacity Ownership Price shall be determined pursuant to Section III.A. above. There will be no adjustment for the book value of the support facilities dedicated to the PNW AC Intertie. Capacity Owners will either receive a refund, with interest, from Bonneville or make an additional payment, with interest, to Bonneville. Bonneville shall compute interest using the weighted average interest rate on Bonneville's outstanding bonds.

##### **C. PNW AC Intertie Upgrade Payments**

Capacity Owners shall pay a share of the upgrades to Bonneville's PNW AC Intertie in the manner and time to be determined when participation in such upgrades are agreed to pursuant to the Capacity Ownership agreement.

Schedule AC-93  
Southern Intertie Annual Cost

**SECTION I. AVAILABILITY**

This schedule is applicable to all parties (New Owners) that execute PNW AC Intertie Capacity Ownership Agreements (Agreements) and will be effective on the date described in the Agreement. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

**SECTION II. RATE**

The rate charges reflect the terms of the Memorandum of Understanding (MOU), signed in the Fall of 1991, between BPA and potential New Owners. The MOU provides for the payment by New Owners of their prorated share of: (1) BPA's annual operations, maintenance, and general plant expense (including applicable overheads) properly chargeable to the AC Intertie facilities; and (2) BPA's share of capitalized replacements on the AC Intertie. The monthly charge shall be the sum of the charges specified in sections II.A and II.B.

**A. Operations, Maintenance, and General Plant**

The monthly charge shall equal \$325 per megawatt of billing demand.

**B. Replacements**

The monthly charge shall equal \$0 per megawatt of billing demand.

**SECTION III. ADJUSTMENT TO REPLACEMENTS RATE**

**A. Determination of Billing Adjustment**

New Owners will receive a billing adjustment if BPA incurs AC Intertie replacement cost during the rate period. The Replacements Rate Adjustment equals:

$$\frac{\text{AC Intertie work orders } (\$(XX)) \times \%}{725 \text{ MW} \times \# \text{ months}}$$

where:

"# months" equals: (1) the number of months that this rate schedule is in effect during the fiscal year for the Initial Replacements Rate Adjustment; or (2) the number of months in the rate period for the Final Replacements Rate Adjustment; and

"%" equals the New Owners' percentage share of BPA's total AC Intertie Rated Transfer Capability as specified in the Agreements.

**B. Initial Replacements Rate Adjustment**

New Owners will receive a billing adjustment for each fiscal year that BPA incurs AC Intertie replacement cost. At the end of each fiscal year, the cost associated with AC Intertie capital replacement work orders that have closed during the fiscal year will be determined. The unit rate that would result using these closed work orders is the basis of the Initial Replacements Rate Adjustment.

**1. Notice Provisions**

Following each fiscal year, BPA shall notify all New Owners by December 15 of the proposed Replacements Rate Adjustment. BPA will provide the calculation of the adjustment and a short description of the work performed and the associated cost used as the basis for the billing adjustment. In addition to written notification, BPA may, but is not obligated to, hold a public meeting to clarify its determinations.



Schedule AC-93  
(Continued)

Written comments on the Initial Replacements Rate Adjustment will be accepted through the end of January. Consideration of comments submitted by the New Owners may result in the billing adjustment differing from the initially proposed adjustment. BPA shall notify all New Owners of the Initial Replacements Rate Adjustment by the last day of February.

2. Adjustment of Monthly Bills

An adjustment will be made on the New Owner's monthly bill prepared during March. The Initial Replacements Rate adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal year (i.e., the New Owner's share in megawatts of BPA's PNW AC Inertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal year). The Initial Replacements Rate Adjustment will appear as a charge to the New Owner on the monthly bill prepared during March.

C. Final Replacements Rate Adjustment

The actual costs associated with the AC Inertie capital replacement work orders that occur during the rate period may change after BPA performs its final analysis of the work orders. BPA shall compare the unit rate for the rate period using the results of the final work order analysis to the weighted average of the unit rates from the Initial Replacements Rate Adjustments.

I. Notice Provisions

BPA shall notify all New Owners in May 1998 of the results of the calculations, an explanation of work

order change(s), and any resulting billing adjustment. Written comments from New Owners will be accepted through the end of June. BPA shall notify all New Owners of the Final Replacements Rate Adjustment by July 31. Consideration of comments submitted by the New Owners may result in the Final Replacements Rate Adjustment differing from the initially proposed adjustment.

2. Adjustment of Monthly Bills

If the absolute value of the Final Replacements Rate Adjustment is greater than or equal to \$1 per megawatt per month, an adjustment will be made on the New Owner's monthly bill prepared during August. For each New Owner, the Final Replacements Rate Adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal years (i.e., the New Owner's share in megawatts of BPA's PNW AC Inertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal years). The Final Replacements Rate Adjustment will appear as a charge or credit to the New Owner on the monthly bill prepared during August. Interest, as determined by BPA's Office of Financial Management, will be included in any adjustment.

SECTION IV. BILLING FACTOR

The billing demand shall be the New Owner's capacity ownership share in megawatts of BPA's PNW AC Inertie Rated Transfer Capability as specified in the Agreement.

Schedule IS-93  
Southern Intertie Transmission

SECTION I. AVAILABILITY

This schedule supersedes IS-91 and is available for all transmission on the Southern Intertie. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

A. Nonfirm Transmission Rate

The charge for nonfirm transmission of non-BPA power shall be 3.11 mills per kilowatt-hour of billing energy. This charge applies for both north-to-south and south-to-north transactions.

B. Firm Transmission Rate

The charge for firm transmission service shall be \$0.706 per kilowatt per month of billing demand and 1.69 mills per kilowatt-hour of billing energy. Firm transmission will only be made available to customers under this rate schedule who have executed a contract with BPA specifying use of the Firm Transmission rate for either north-to-south or south-to-north transactions.

SECTION III. BILLING FACTORS

- A. For services under Section II.A, the billing energy shall be the monthly sum of the scheduled kilowatt-hours, plus the monthly sum of kilowatt-hours allocated but not scheduled. The amount of allocated but not scheduled energy that is subject to billing may be reduced pro rata by BPA due to forced Intertie outages and other uncontrollable forces that may reduce Intertie capacity. The amount of allocated but not scheduled energy that is subject to billing

also may be reduced upon mutual agreement between BPA and the customer.

- B. For services under Section II.B, the billing demand shall be the Transmission Demand as defined in the Agreement. The billing energy shall be the monthly sum of scheduled kilowatt-hours, unless otherwise specified in the Agreement.

## General Transmission Rate Schedule Provisions

### SECTION I. ADOPTION OF REVISED TRANSMISSION RATE SCHEDULES AND GENERAL TRANSMISSION RATE SCHEDULE PROVISIONS (GTRSPs)

#### A. Approval of Rates

These rate schedules and GTRSPs shall become effective upon interim approval or upon final confirmation and approval by FERC. BPA will request FERC approval effective October 1, 1993.

#### B. General Provisions

These 1993 Transmission Rate Schedules and associated GTRSPs are virtually identical to and supersede BPA's 1991 Transmission Rate Schedules and GTRSPs (which became effective October 1, 1991) but do not supersede prior rate schedules required by agreement to remain in force.

Transmission service provided shall be subject to the following Acts, as amended: the Bonneville Project Act, the Regional Preference Act (P.L. 88-552), the Federal Columbia River Transmission System Act, and the Pacific Northwest Electric Power Planning and Conservation Act, and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992).

The meaning of terms used in the transmission rate schedules shall be as defined in agreements or provisions which are attached to the Agreement or as in any of the above Acts.

#### C. Interpretation

If a provision in the executed Agreement is in conflict with a provision contained herein, the former shall prevail.

### SECTION II. BILLING FACTOR DEFINITIONS AND BILLING ADJUSTMENTS

#### A. Billing Factors

##### 1. Scheduled Demand

The largest of hourly amounts wheeled which are scheduled by the customer during the time period specified in the rate schedules.

##### 2. Metered Demand

The Metered Demand in kilowatts shall be the largest of the 60-minute clock-hour integrated demands measured by meters installed at each POD during each time period specified in the applicable rate schedule. Such measurements shall be made as specified in the Agreement. BPA, in determining the Metered Demand, will exclude any abnormal readings due to or resulting from: (a) emergencies or breakdowns on, or maintenance of, the FCRTS; or (b) emergencies on the customer's facilities, provided that such facilities have been adequately maintained and prudently operated as determined by BPA. If more than one class of power is delivered to any POD, the portion of the metered quantities assigned to any class of power shall be as agreed to by the parties. The amount so assigned shall constitute the Metered Demand for such class of power.

3. Transmission Demand

The demand as defined in the Agreement.

4. Total Transmission Demand

The sum of the transmission demands as defined in the Agreement.

5. Ratchet Demand

The maximum demand established during the previous 11 billing months. Exception: If a Transmission Demand or Total Transmission Demand has been decreased pursuant to the terms of the Agreement during the previous 11 billing months, such decrease will be reflected in determining the Ratchet Demand.

B. Billing Adjustments

Average Power Factor

The adjustment for average power factor, when specified in a transmission rate schedule or in the Agreement, shall be made in accordance with the average power factor section of the General Wheeling Provisions.

To maintain acceptable operating conditions on the Federal system, BPA may restrict deliveries of power at any time that the average leading power factor or average lagging power factor for all classes of power delivered to such point or to such system is below 85 percent.

SECTION III. OTHER DEFINITIONS

Definitions of the terms below shall be applied to these provisions and the Transmission Rate Schedules, unless otherwise defined in the Agreement.

A. Agreement

An agreement between BPA and a customer to which these rate schedules and provisions may be applied.

B. Eastern Intertie

The segment of the FCRTS for which the transmission facilities consist of the Townsend-Garrison double-circuit 500 kV transmission line segment including related terminals at Garrison.

C. Electric Power

Electric peaking capacity (kW) and/or electric energy (kWh).

D. Federal Columbia River Transmission System

The transmission facilities of the Federal Columbia River Power System, which include all transmission facilities owned by the government and operated by BPA, and other facilities over which BPA has obtained transmission rights.

E. Firm Transmission Service

Transmission service which BPA provides for any non-BPA power except for transmission service which is scheduled as nonfirm. If the firm service is provided pursuant to the Agreement, the terms of the Agreement may further define the service.

F. Integrated Network

The segment of the FCRTS for which the transmission facilities provide the bulk of transmission of electric power within the Pacific Northwest, excluding facilities not segmented to the network as shown in the Wholesale Power Rate Development Study used in BPA's rate development.

G. Main Grid

As used in the FPT and IR rate schedules, that portion of the Integrated Network with facilities rated 230 kV and higher.

H. Main Grid Distance

As used in the FPT rate schedules, the distance in airline miles on the Main Grid between the POI and the POD, multiplied by 1.15.

I. Main Grid Interconnection Terminal

As used in the FPT rate schedules, Main Grid terminal facilities that interconnect the FCRTS with non-BPA facilities.

J. Main Grid Miscellaneous Facilities

As used in the FPT rate schedules, switching, transformation, and other facilities of the Main Grid not included in other components.

K. Main Grid Terminal

As used in the FPT rate schedules, the Main Grid terminal facilities located at the sending and/or receiving end of a line exclusive of the Interconnection terminals.

L. Nonfirm Transmission Service

Interruptible transmission service which BPA may provide for non-BPA power.

M. Northern Intertie

The segment of the FCRTS for which the transmission facilities consist of two 500 kV lines between Custer Substation and the United States-Canadian border, one 500 kV line between Custer and Monroe Substations, and two 230 kV lines from Boundary Substation to the United States-Canadian border, and the associated substation facilities.

N. Point of Integration (POI)

Connection points between the FCRTS and non-BPA facilities where non-Federal power is made available to BPA for wheeling.

O. Point of Delivery (POD)

Connection points between the FCRTS and non-BPA facilities where non-Federal power is delivered to a customer by BPA.

P. Secondary System

As used in the FPT and IR rate schedules, that portion of the Integrated Network facilities with operating voltage of 115 kV or 69 kV.

Q. Secondary System Distance

As used in the FPT rate schedules, the number of circuit miles of Secondary System transmission lines between the secondary POI and the Main Grid or the secondary POD, or the Main Grid and the secondary POD.

R. Secondary System Interconnection Terminal

As used in the FPT rate schedules, the terminal facilities on the Secondary System that interconnect the FCRTS with non-BPA facilities.

S. Secondary System Intermediate Terminal

As used in the FPT rate schedules, the first and final terminal facilities in the Secondary System transmission path exclusive of the Secondary System Interconnection terminals.

T. Secondary Transformation

As used in the FPT rate schedules, transformation from Main Grid to Secondary System facilities.

#### U. Southern Intertie

The segment of the FCRTS for which the major transmission facilities consist of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; when completed, the Third AC facilities, which include Captain Jack Substation and the Alvey-Meridian 500 kV AC line; one 1,000 kV DC line between the Celilo Substation and the Oregon-Nevada border; and associated substation facilities.

#### V. Transmission Service

As used in the MT rate schedule, Transmission Service is as defined in the Western Systems Power Pool Agreement.

### SECTION IV. BILLING INFORMATION

#### A. Payment of Bills

Bills for transmission service shall be rendered monthly by BPA. Failure to receive a bill shall not release the customer from liability for payment. Bills for amounts due of \$50,000 or more must be paid by direct wire transfer; customers who expect that their average monthly bill will not exceed \$50,000 and who expect special difficulties in meeting this requirement may request, and BPA may approve, an exemption from this requirement. Bills for amounts due BPA under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by BPA. The procedures to be followed in making direct wire transfers will be provided by the Office of Financial Management and updated as necessary.

##### 1. Computation of Bills

The transmission billing determinant is the electric power quantified by the

method specified in the Agreement or Transmission Rate Schedule. Scheduled power or metered power will be used.

The transmission customer shall provide necessary information to BPA for any computation required to determine the proper charges for use of the FCRTS, and shall cooperate with BPA in the exchange of additional information which may be reasonably useful for respective operations.

Demand and energy billings for transmission service under each applicable rate schedule shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amount from 50 cents through 99 cents to the next higher dollar.

##### 2. Estimated Bills

At its option, BPA may elect to render an estimated bill to be followed at a subsequent billing date by a final bill. The estimated bill shall have the validity of and be subject to the same payment provisions as a final bill.

##### 3. Billing Month

For charges based on scheduled quantities, the billing month is the calendar month. For charges based on metered quantities, the billing month is defined as the interval between scheduled meter-reading dates. The billing month will not exceed 31 days in any case. While it may be necessary to read meters on a day other than the scheduled meter-reading date, for determination of billing demand, the billing month will cease at 2400 hours on the last scheduled meter-reading date. Schedules will be predetermined. The customer must give 30 days notice to request a change to the schedule.

4. Due Date

Bills shall be due by close of business on the 20th day after the date of the bill (due date). Should the 20th day be a Saturday, Sunday, or holiday (as celebrated by the customer), the due date shall be the next following business day.

5. Late Payment

Bills not paid in full on or before close of business on the due date shall be subject to a penalty charge of \$25. In addition, an interest charge of one-twentieth percent (0.05 percent) shall be applied each day to the sum of the unpaid amount and the penalty charge. This interest charge shall be assessed on a daily basis until such time as the unpaid amount and penalty charge are paid in full.

Remittances received by mail will be accepted without assessment of the charges referred to in the preceding paragraph provided the postmark indicates the payment was mailed on or before the due date. Whenever a power bill or a portion thereof remains unpaid subsequent to the due date and after giving 30 days' advance notice in writing, BPA may cancel the contract for service to the customer. However, such cancellation shall not affect the customer's liability for any charges accrued prior thereto under such agreement.

6. Disputed Billings

In the event of a disputed billing, full payment shall be rendered to BPA and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified above. BPA shall separately account for the disputed amount. If it is determined that the customer is entitled to the disputed

amount, BPA shall refund the disputed amount with interest, as determined by BPA's Office of Financial Management.

BPA retains the right to verify, in a manner satisfactory to the Administrator, all data submitted to BPA for use in the calculation of BPA's rates and corresponding rate adjustments. BPA also retains the right to deny eligibility for any BPA rate or corresponding rate adjustment until all submitted data have been accepted by BPA as complete, accurate, and appropriate for the rate or adjustment under consideration.

7. Revised Bills

As necessary, BPA may render a revised bill.

- a. If the amount of the revised bill is less than or equal to the amount of the original bill, the revised bill shall replace all previous bills issued by BPA that pertain to the specified customer for the specified billing period and the revised bill shall have the same date as the replaced bill.
- b. If a revision causes an additional amount to be due BPA or the specified customer beyond the amount of the original bill, a revised bill will be issued for the difference and the date of the revised bill shall be its date of issue.

## Annual Costs Rate

### A. PROPOSED SOUTHERN INTERTIE ANNUAL COST RATE

#### SECTION I. AVAILABILITY

This schedule is applicable to each party (Capacity Owner) that executes a PNW AC Intertie Capacity Ownership Agreement (Agreement). Billings pursuant to this schedule is subject to the Billing Provisions in Exhibit B of the Agreement. This rate schedule shall be effective on the first day of the fiscal year following the earlier of interim or final FERC approval of this rate schedule. Unless otherwise defined in this rate schedule, capitalized terms used in this rate schedule shall have the respective definitions set forth in section 1 of this Agreement.

#### SECTION II. RATE

##### A. Operations

The monthly charge equals:

$$\frac{\text{Operations Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Operations Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Operations Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville’s PNW AC Intertie, operations Indirect Costs for Bonneville’s PNW AC Intertie, and operations Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Operations rate shall be calculated using the forecast Operations Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is



amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Operations Cost shall be calculated using the forecast Operations Cost less the Operations Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **B. Maintenance**

The monthly charge equals:

$$\frac{\text{Maintenance Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Maintenance Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Maintenance Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville’s PNW AC Intertie, maintenance Indirect Costs for Bonneville’s PNW AC Intertie, and maintenance Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Maintenance rate shall be calculated using the forecast Maintenance Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Maintenance Cost shall be calculated using the forecast Maintenance Cost less the Maintenance Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **C. General Plant**

The monthly charge equals:

$$\frac{\text{General Plant Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to General Plant Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“General Plant Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville’s general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the General Plant rate shall be calculated using the General Plant Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for General Plant Cost shall be calculated using the General Plant Cost less the General Plant Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **D. Other Costs**

The monthly charge equals:

$$\frac{\text{Other Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Other Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Other Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s other costs for Bonneville’s PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Other Costs rate shall be calculated using the forecast Other Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Other Costs shall be calculated using the forecast Other Costs less the Other Costs already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **E. Contracts and Rates**

The monthly charge equals:

$$\frac{\text{Contracts and Rates Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Contracts and Rates Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Contracts and Rates Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville’s total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Contracts and Rates Cost is determined in accordance with section VI of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Contracts and Rates Cost determined in accordance with section VI of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Contracts and Rates rate shall be calculated using the forecast Contracts and Rates Costs in the Operating Plan in effect during the

month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Contracts and Rates Cost shall be calculated using the forecast Contracts and Rates Cost less the Contracts and Rates Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **F. Power Scheduling**

The monthly charge equals:

$$\frac{\text{Power Scheduling Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Power Scheduling Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Power Scheduling Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Power Scheduling Cost is determined in accordance with section VII of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Power Scheduling Cost determined in accordance with section VII of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Power Scheduling rate shall be calculated using the forecast Power Scheduling Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan

pertains, the monthly charge for Power Scheduling Cost shall be calculated using the forecast Power Scheduling Cost less the Power Scheduling Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **G. End of Term**

The monthly charge shall equal:

$$\frac{\text{End of Term Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to End of Term Costs, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“End of Term Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the End of Term rate shall be calculated using the forecast End of Term Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for End of Term Costs shall be calculated using the forecast End of Term Costs less the End of Term Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **H. Replacements and Reinforcements**

1. For each Replacement, the charge equals:

$$\text{Replacement Cost} * \text{Capacity Ownership Percentage}$$

2. For each Reinforcement, the charge equals:

$$\text{Reinforcement Cost} * \text{Capacity Ownership Percentage}$$

Where

"Replacement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Replacement Cost does not include capitalized general plant cost. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Reinforcement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Reinforcement Cost does not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The charge for the Replacements and Reinforcements rate shall use the actual Replacement Cost and Reinforcement Cost in the Operating Plan.

### **SECTION III. ADJUSTMENTS**

If an amendment to the Operating Plan results in a net amount that Bonneville owes the Capacity Owners pursuant to sections II.A-G or pursuant to section II.H, Bonneville shall refund such net amount pursuant to paragraph 9(f)(4) of the Agreement.

The monthly charges assessed Capacity Owners under sections II.A-G shall be adjusted, and payment or refund made with interest, pursuant to paragraphs 9(b)(2) or 9(f)(4) of the Agreement, to reflect amendments to the Operating Plan that occur after the year to which such Operating Plan pertains.

A Capacity Owner's share of the adjustment shall be determined using the same Capacity Ownership Percentage used in the billings under sections II.A-G during the fiscal year that such Operating Plan is effective.

**B. BILLING PROVISIONS**

**I. General Provisions**

**A. Approval of Rates**

The annual costs rate shall become effective upon interim approval or upon final confirmation and approval by FERC. Bonneville will request FERC approval of such rate schedule effective on the first day of a Bonneville fiscal year.

**B. Application of Billing Provisions**

These Billing Provisions shall apply to bills rendered by Bonneville pursuant to the annual costs rate.

**C. Definition of Terms**

The meaning of terms used in the AC-95 rate shall be as defined in the Agreement or, if no definition is provided by the Agreement, such terms shall be defined according to applicable Federal law.

**II Billing Information**

**Payment of Bills**

Charges pursuant to the AC-95 rate shall be included in Bonneville's monthly power bill to Capacity Owner. Failure to receive a power bill shall not release Capacity Owner from liability for payment. Power bills for amounts due of \$50,000 or more must be paid by direct wire transfer. If Capacity Owner anticipates special difficulties in meeting this requirement, Capacity Owner may request and Bonneville may approve an exemption from this requirement. Power bills for amounts due Bonneville under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by Bonneville. The procedures to be followed in making direct wire transfers will be provided by Bonneville's Financial Services Group and updated as necessary.

**(1) Computation of Bills**

**(a) Bonneville shall bill Capacity Owner in accordance with the annual costs rate.**



(b) Capacity Owner shall provide necessary information to Bonneville for any computation required to determine proper charges pursuant to the Agreement and shall cooperate with Bonneville in the exchange of additional information which may be reasonably useful for respective operations.

(c) Bills rendered pursuant to this Agreement shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents to 99 cents to the next higher whole dollar.

(2) Billing Month

For charges pursuant to the annual costs rate the billing month shall be the same as for the power bill rendered by Bonneville to Capacity Owner.

(3) Due Date

Charges pursuant to the annual costs rate shall be included in the power bill rendered by Bonneville to Capacity Owner and shall be due as part of the power bill when such power bill is due.

(4) Late Payment

The penalties for failure to pay a bill in full on or before close of business on the due date shall be the same as those contained in the late payment provisions in Bonneville's General Transmission Rate Schedule Provisions in effect on the date of the bill; provided, however, that no other provision of any such General Transmission Rate Schedule Provisions, including, but not limited to, provisions regarding cancellation, termination, or suspension of service, shall have application with respect to the payment of any rate or charge pursuant to the annual costs rate set forth in Exhibit B. Bonneville's right to suspend service for late payment under the Agreement shall be pursuant to paragraph 9(e)(1) of this Agreement, which right shall in no way be limited by this section.

(5) Disputed Bills

In the event of a disputed bill, full payment shall be rendered to Bonneville and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified in section II(4) of the Billing Provisions of this Exhibit B. Bonneville shall separately account for the disputed amount. If it is determined that Capacity Owner is entitled to the disputed amount, Bonneville shall refund the disputed amount with interest, such interest to

be determined by Bonneville's Financial Services Group. In the event that Bonneville and Capacity Owner do not resolve such dispute, Capacity Owner shall not be prevented by this section II(5) of the Billing Provisions of this Exhibit B from initiating arbitration pursuant to and to the extent allowed by section 15 of this Agreement.

(6) Revised Bills

If Bonneville determines that it has over- or under-charged Capacity Owner due to a computational error or pursuant to an amendment to the Operating Plan in any given billing month, Bonneville may render to Capacity Owner a revised bill.

(i) If the amount of the revised bill is less than or equal to the amount of the original bill for such billing month, the revised bill shall replace the original bill issued by Bonneville. The revised bill shall have the same date as the original bill.

(ii) If the amount of the revised bill is greater than the amount of the original bill for such billing month, a new bill will be issued for the difference between the revised bill and the original bill. The date of the new bill shall be its date of issuance, and Capacity Owner shall make payment to Bonneville as specified in the Billing Provisions of this Exhibit B.

**Capacity Ownership Share, Capacity Ownership Percentage, Scheduling  
Percentage, and Scheduling Share**

Capacity Ownership  
Share = 50 MW

Capacity Ownership  
Percentage = Capacity Ownership Share ÷ Bonneville's PNW AC Intertie  
Rated Transfer Capability<sup>1</sup>

Scheduling Percentage = Capacity Ownership Share ÷ PNW AC Intertie Rated  
Transfer Capability

Scheduling Share = Scheduling Percentage × PNW AC Intertie Operational  
Transfer Capability

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<sup>1/</sup> As of the Effective Date, Bonneville's PNW AC Intertie Rated Transfer Capability in a north-to-south direction, calculated in accordance with the Northwest Intertie Agreements equals 3450 MW (total PNW AC Intertie Rated Transfer Capability (4800 MW) – Portland's PNW AC Intertie Rated Transfer Capability (950 MW) – PacifiCorp's PNW AC Intertie Rated Transfer Capability (400 MW)).

### Lump Sum Payment Calculation

A. SECOND 800 MW COSTS, ESTIMATED<sup>1</sup>, ACTUAL<sup>2</sup>, AND REVISED ACTUAL<sup>3</sup>

		(\$ in Thousands)		
		(1)	(2)	
<u>Facilities whose costs will be adjusted using change Between Estimate and Actual</u>		<u>BPA's Costs Estimated</u>	<u>BPA's Costs Actual</u>	<u>BPA's Costs Revised Actual</u>
1.	Alvey (Marion-Alvey Caps)	\$5,739		
2.	Slatt (Loop in - Breaker)	3,044		
3.	Grizzly (BPA Breakers)	11,044		
4.	Loop into Slatt	656		
5.	Malin-Meridian loop into Captain Jack	982		
6.	Alvey Substation - BPA	8,168		
7.	Dixonville - PacifiCorp	8,635		
8.	Meridian - PacifiCorp	6,548		
9.	Power System Control	3,575		
10.	Alvey-Spencer - BPA	1,346		
11.	Spencer-Dixonville - PacifiCorp	20,388		
12.	Dixonville-Meridian - PacifiCorp	<u>32,140</u>		
	SUBTOTAL	102,265		
<u>Facilities whose costs will be adjusted using Change Between Estimate and Actual, multiplied by 50 percent</u>				
13.	Captain Jack (BPA Breakers)	\$14,335		
14.	Captain Jack (Communication and Control)	5,100		
15.	Captain Jack (Series Capacitors)	722		
16.	Power System Control	5,596		
17.	Captain Jack line to Oregon-Calif. border	<u>5,724</u>		
	SUBTOTAL	\$31,477		
	50 PERCENT OF SUBTOTAL	<u>15,739</u>		
	TOTAL	<u>\$118,004</u>		

- 1/ Based on mid-1989 program planning levels.
- 2/ Actual costs will be available approximately December 1995, or as soon as practicable thereafter. Supporting documentation will be provided including work orders and accounting data for each line item.
- 3/ For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the revised actual costs of facilities pertaining to each such calculation of the Revised Adjusted Capacity Ownership Price.

**B. INITIAL, ADJUSTED, AND REVISED ADJUSTED CAPACITY OWNERSHIP PRICE<sup>1</sup>**

	(1)	(\$ in Millions) (2)	
<u>Cost Item</u>	Initial Capacity Ownership Price	Adjusted Capacity Ownership Price	Revised Adjusted Capacity Ownership Price <sup>2</sup>
1. Second 800 MW	\$118	\$___	\$___
2. AFUDC <sup>3</sup> on Second 800 MW	+ 19	+ ___	+ ___
3. Existing Support Facilities	+ <u>19.1</u>	+ <u>19.1<sup>4</sup></u>	+ <u>19.1<sup>4</sup></u>
4. Total Cost <sup>5</sup>	\$156	\$___	\$___
5. PRICE PER KW (CO-94) <sup>6</sup>	<u>\$215</u>	\$___	\$___

- 
- 1/ Initial, Adjusted, and Revised Adjusted Capacity Ownership Price are determined in accordance with the CO-94 rate in Exhibit A.
  - 2/ Bonneville may make multiple calculations of the Revised Adjusted Capacity Ownership Price pursuant to paragraph 9(a)(3). For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the column pertaining to such calculation and the columns for any previous calculations of the Revised Adjusted Capacity Ownership Price.
  - 3/ AFUDC will be calculated in accordance with the CO-94 rate in Exhibit A.
  - 4/ Not adjusted in calculating the Adjusted Capacity Ownership Price or the Revised Adjusted Capacity Ownership Price.
  - 5/ Bonneville's indirect costs and overhead costs shall be included. Such indirect costs and overhead costs shall be allocated or distributed to the Third AC Intertie Project using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Third AC Intertie Project was under construction. Such allocation or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's Third AC Intertie Project than with respect to any other transmission projects under construction at the same time.
  - 6/ Price per kW is derived by dividing the Total Cost by 725 MW.

C. INITIAL LUMP SUM PAYMENT

1.	PNGC's Capacity Ownership Share	=	50 MW
2.	Initial Capacity Ownership Price	X	\$215 (\$215,000/MW)
3.	Initial Lump Sum Payment <sup>1</sup>	=	\$10,750,000
4.	Deduction: Negotiation Deposit with Interest <sup>2</sup>	-	
5.	Due to Bonneville:	=	

-----  
1/ Initial Lump Sum Payment is calculated in accordance with section IV.A of the CO-94 rate in Exhibit A.

2/ Interest is calculated as specified in Bonneville's April 23, 1993, letter to PNGC. The rate of interest for the computation is the interest rate applicable to 3-month Treasury Bills as specified in the FEDERAL RESERVE Statistical Release G.13. The rates are determined for the 3-month yield reported on the first day of the month of receipt of the negotiation deposit and on the first day of each subsequent third month thereafter. Interest is compounded quarterly from May 7, 1993, through the date Bonneville receives payment pursuant to paragraph 9(a)(1).

D. ADJUSTED LUMP SUM PAYMENT

1.	PNGC's Capacity Ownership Share	=	50 MW
2.	Adjusted Capacity Ownership Price	X	\$
3.	Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Initial Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to PNGC	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to PNGC	=	

-----  
1/ Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A.

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from the date Bonneville receives payment pursuant to paragraph 9(a)(1) through the date Bonneville or PNGC receives payment pursuant to subparagraph 9(a)(2)(B).

**E. REVISED ADJUSTED LUMP SUM PAYMENT**

1.	PNGC's Capacity Ownership Share	=	50 MW
2.	Current Revised Adjusted Capacity Ownership Price	X	\$
3.	Current Revised Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Adjusted Lump Sum Payment/immediately preceding Revised Adjusted Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to PNGC	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to PNGC	=	

1/ Revised Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A. Bonneville will calculate a Revised Adjusted Lump Sum Payment each time a Revised Adjusted Capacity Ownership Price is calculated pursuant to paragraph 9(a)(3).

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from (a) the date Bonneville or PNGC receives payment with respect to the Adjusted Lump Sum Payment pursuant to paragraph 9(a)(2)(B) or (b) the date Bonneville or PNGC receives payment with respect to the Revised Adjusted Lump Sum Payment immediately preceding the current Revised Adjusted Lump Sum Payment through the date Bonneville or PNGC receives payment with respect to the current Revised Adjusted Lump Sum Payment pursuant to subparagraph 9(a)(3)(B).



**Transmission Loss Factors**

- A. The transmission loss factor to be applied to PNGC's schedules for transactions transmitted on PNGC's Scheduling Share shall be 2.5 percent.
- B. The transmission loss factor to be applied to PNGC's schedules for transactions transmitted pursuant to subparagraph 3(b)(1)(C) shall be 3.0 percent.

**Bonneville's PNW AC Intertie**

**A. TRANSMISSION LINE FACILITIES**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>McNary-John Day 500 kV Line Loop into Slatt:</u>	100	100
• McNary-Slatt Str. 108/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. 1/1 to substation dead end tower, 194 meters		
2. John Day-Grizzly No. 1 500 kV	100	100
3. John Day-Grizzly No. 2 500 kV	100	100
4. Grizzly-Captain Jack No. 1 500 kV	100	100
5. Captain Jack-Malin No. 1 500 kV	100	100
6. Buckley-Grizzly 500 kV	100	57
7. Grizzly-Summer Lake 500 kV	100	57
8. 500 kV double circuit between Buckley and Marion that supports the Buckley- Marion No. 1 and the Ashe-Marion No. 2 500 kV circuits (Str. No. 1/3 to Marion, 159 km)	100	25
9. Marion-Alvey 500 kV	100	50
10. Captain Jack-COB (10 km) 500 kV	100	100
11. Alvey-Dixonville 500 kV	50	100
12. Dixonville-Meridian 500 kV	50	100

**B. SUBSTATION FACILITIES <sup>1/2</sup>**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <b>Slatt 500 kV</b> (Dispatch one-line diagram No. 228962)		
<u>John Day line terminal</u>		
• New Breaker D#5021	100	100
• Existing 500 kV MOD D#5020/7022	100	100
• New 500 kV MOD D#5022	100	100
• Existing 500 kV MOD D#5019	100	50
• Existing Breaker D#5018	100	50

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>McNary line terminal</u>		
	• 500 kV MOD D#5023/7847	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	Station General		
2.	<b>John Day 500 kV</b> (Dispatch one-line diagram No. 132281)		
	<u>Grizzly No.2 line terminal</u>		
	• Breaker D#4131	100	50
	• Breaker D#4134	100	100
	• MOD D#4132	100	50
	• MOD D#4133/7867	100	100
	• MOD D#4135	100	100
	• Associated Line PTs	100	100
	<u>Grizzly No.1 line terminal</u>		
	• Breaker D#4140	100	50
	• Breaker D#4143	100	100
	• MOD D#4141	100	50
	• MOD D#4142/7869	100	100
	• MOD D#4144	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	Station General		
3.	<b>Buckley 500 kV, Gas Insulated Substation</b> (Dispatch one-line diagram No. 232583)		
	<u>Slatt No. 1 line terminal</u>		
	• Breaker D#4967	100	57
	• Isolating switch D#4966/7328	100	57
	• Isolating switch D#4968/7355	100	57
	• Ground switch D#7415	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Summer Lake No. 1 line terminal</u>		
	• Breaker D#4961	100	57

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	• Isolating switch D#4960/7312	100	57
	• Isolating switch D#4962/7313	100	57
	• Ground switch D#7311	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Marion No. 1 line terminal</u>		
	• Breaker D#4964	100	57
	• Isolating switch D#4963/7314	100	57
	• Isolating switch D#4965/7321	100	57
	• Ground switch D#7477	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	Station General		
4.	<b>Marion 500 kV</b> (Dispatch one-line diagram No. 136180)		
	<u>Buckley line terminal</u>		
	• Breaker D#4389	100	50
	• Breaker D#4386	100	25
	• MOD D#4387	100	25
	• MOD D#4390	100	50
	• MOD D#4388/7751	100	50
	• Associated Line PTs	100	50
	<u>Alvey line terminal</u>		
	• Breaker D#4374	100	50
	• Breaker D#4377	100	25
	• MOD D#4376	100	25
	• MOD D#4375/7922	100	50
	• MOD D#4373	100	50
	• Associated Line PTs	100	50
	Station General		
5.	<b>Alvey 500 kV</b> (Dispatch one-line diagram No. 121424)		
	<u>Bank No. 5 terminal</u>		
	• Breaker D#5081	50	100
	• MOD D#5080	50	100
	• MOD D#5082	50	100
	• MOD D#5090	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#5089/8157	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 line terminal</u>		
• Breaker D#5084	50	100
• MOD D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 line terminal</u>		
• Breaker D#5087	50	100
• MOD D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV line)</u>	50	100
• MODs D#5100/8160,5101/8159, 5102/8158	50	100
• Bypass breaker D#5103	50	100

Station General

6. **BPA/PacifiCorp Dixonville 500 kV Station** (PacifiCorp's one-line diagram PD-40020)

Note: PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299, as revised or amended.

For Alvey and Meridian line terminals

• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of line terminal PTs	50	100
• Two sets of line terminal arresters	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

<ul style="list-style-type: none"> <li>• Series Capacitor Bank in Alvey-Dixonville 500 kV line and associated isolating devices</li> <li>• 180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices</li> </ul>	<p>50</p> <p>50</p>	<p>100</p> <p>100</p>
<p>Station General</p>		
<p>7. <b>BPA/PacifiCorp Meridian 500 kV Yard</b> (PacifiCorp's one-line diagram PD-32976)</p>		
<p><u>Note:</u> PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299.</p>		
<p><u>For Dixonville line terminal</u></p>		
<ul style="list-style-type: none"> <li>• Breakers 11R2, 11R6</li> <li>• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711</li> <li>• One set of line PTs</li> <li>• One set of line terminal arresters for the Dixonville line and one set for the Captain Jack line</li> <li>• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices</li> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV line and associated isolating devices.</li> </ul>	<p>50</p> <p>100</p> <p>50</p> <p>50</p> <p>50</p> <p>50</p>	<p>50</p> <p>100</p> <p>100</p> <p>100</p> <p>100</p> <p>100</p>
<p>Station General</p>		
<p>8. <b>Grizzly 500 kV</b> (Dispatch one-line diagram No. 103924)</p>		
<p><u>John Day No. 1 line terminal</u></p>		
<ul style="list-style-type: none"> <li>• Breaker D#4058</li> <li>• Breaker D#5040</li> <li>• MOD D#4059</li> <li>• MOD D#4057/7848</li> </ul>	<p>100</p> <p>100</p> <p>100</p> <p>100</p>	<p>100</p> <p>100</p> <p>100</p> <p>100</p>

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4056	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 line terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 line terminal</u>		
• Breaker D#5031	100	100
• Breaker D#5028	100	100
• MOD D#5032	100	100
• MOD D#5030/8122	100	100
• MOD D#5029	100	100
• MOD D#5027	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#5037	100	100
• Breaker D#5034	100	100
• MOD D#5038	100	100
• MOD D#5036/8123	100	100
• MOD D#5035	100	100
• MOD D#5033	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake line terminal</u>		
• Breaker D#5025	100	100
• MOD D#5026/8121	100	100
• MOD D#5024	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

	<u>180 MVAR Reactor Bank No. 1</u>	100	100
	• Breaker D#4222	100	100
	• Isolating Switch D#4060	100	100
	• Associated Arresters	100	100
	<u>300 MVAR Reactor Bank No. 2</u>	100	100
	• Breaker D#4720	100	100
	• Isolating Switch D#4719	100	100
	• Associated Arresters	100	100
	• 300 MVAR Reactor Bank No. 3 and Neutral Reactor	100	100
	• Breaker D#4038	100	100
	• Isolating Switch D#4062	100	100
	• Neutral isolating switch D#4109/4081	100	100
	• Associated Arresters	100	100
	• Associated PTs	100	100
	• North Main Bus 500 kV PTs	100	100
	• South Main Bus 500 kV PTs	100	100
	Station General		
9.	<b>Sand Spring 500 kV Compensation Station</b> (Dispatch one- line diagram No. 142239)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
10.	<b>Fort Rock 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142237)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
11.	<b>Sycan 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142238)		



% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Summer Lake-Malin line) and associated equipment but <b>excluding</b> the bypass MOD D#5065 and transmission tower	65	100
	Station General		
12.	<b>Summer Lake 500 kV</b> (Dispatch one-line diagram No. 232667)		
	<u>Grizzly line terminal</u> (formerly Buckley-Ponderosa Tap)		
	• Breaker D#4959	100	57
	• MOD D#4955	100	57
	• MOD D#4956/7309	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Malin line terminal</u>		
	• Line protective relays	0	100
	Station General		
13.	<b>Malin 500 kV</b> (Dispatch one-line diagram No. 103923)		
	<u>Captain Jack No. 1 line terminal</u>		
	• Breaker D#4066	100	100
	• Breaker D#4064	100	100
	• MOD D#4068	100	100
	• MOD D#4067/7849	100	100
	• MOD D#4065	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 1 terminal</u>		
	• Breaker D#4186	50	100
	• MOD D#4063/7970	100	100
	• MOD D#4185	50	100
	• MOD D#4187	50	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 2 terminal</u>		

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• Breaker D#4582	50	100
• MOD D#4583	50	100
• MOD D#4581	50	100
• MOD D#4074/7856	75	100
<u>Grizzly No. 2/Round Mountain No. 2 line position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
<u>North Main Bus 500 kV PTs</u>	100	100
<u>South Main Bus 500 kV PTs</u>	50	100
<u>300 MVAR Shunt Reactor Bank No. 1 and associated arresters and isolating devices (D#4327, 4393)</u>	100	100
<u>2-239 MVAR Shunt Cap. Banks and associated isolating devices (D#4183, 4181, 4184, 4182, 8065, 8066)</u>	100	100
<u>Line protective relays for Summer Lake line</u>	0	100
Station General		
14. <b>Captain Jack 500 kV</b> (Dispatch one-line diagram No. 248548)		
<u>Series Cap. Bank No. 1</u> (Captain Jack-Olinda line)	100	100
• MODs D#4974/8101, 4973/8099, 4975/8100	100	100
• Bypass breaker D#4971, 4972		
<u>Grizzly No. 1 line terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD D#4991/8104	100	100
• MOD D#4992	100	100
• MOD D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 line terminal</u>		
• Breaker D#4996	100	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Olinda No. 1 line terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
<u>North Main Bus 500 kV PTs</u>	100	100
South Main Bus 500 kV PTs	100	100
Station General		
<b>15. Chief Joseph Substation (Dispatch one-</b>		
<b>line diagram No. 124313)</b>		
<u>230 kV, 1400 MW Braking Resistor</u>	100	100
Includes breaker dispatch No. A-594, a		
high speed vacuum switch and one 230 kV		
isolating switch in Bay 12		
Station General		

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1/ Station General will be allocated to each substation according to Bonneville's standard methodology.

2/ Each substation includes associated relays.

**Capacity Owners**

<b>CAPACITY OWNER</b>	<b>CONTRACT NUMBER</b>	<b>CAPACITY OWNERSHIP SHARE (MW)</b>	<b>CAPACITY OWNERSHIP PERCENTAGE</b>
PNGC	DE-MS79-94BP94523	50	1.4
Puget	DE-MS79-94BP94521	400	11.6
Seattle	DE-MS79-94BP94522	160	4.6
Snohomish	DE-MS79-94BP94525	42	1.2
Tacoma	DE-MS79-94BP94524	41	1.1

PNGC: Pacific Northwest Generating Cooperative  
Puget: Puget Sound Power & Light Company  
Seattle: City of Seattle, City Light Department  
Snohomish: Public Utility District No. 1 of Snohomish County  
Tacoma: Tacoma Public Utilities

**Provisions Required by Statute or Executive Order**

1. Contract Work Hours and Safety Standards Act (40 U.S.C. & 327, et seq.).

(a) Overtime Requirements.

PNGC, contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation; liability for unpaid wages; liquidated damages.

In the event of any violation of the provisions set forth in section 1 of this Exhibit H, PNGC and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, PNGC and such subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in section 1 of this Agreement in the sum of \$10.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provision set forth in section 1 of this Exhibit.

(c) Withholding for unpaid wages and liquidated damages.

The person designated in writing by Bonneville's Administrator with the Authority to enter into, administer, modify, suspend or terminate this Exhibit, make related determinations and findings and bind Bonneville only to the extent of delegated authority shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by PNGC or its subcontractor, if any, under any such

contract or any other federal contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of PNGC or such subcontractor for unpaid wages and liquidated damages as provided in section 2 of this Exhibit.

2. Convict Labor (Exec. Order No. 11755, Dec. 29, 1979).

In connection with the performance or work under this Agreement, PNGC and any subcontractor, if any agrees not to employ any person undergoing sentence of imprisonment except as otherwise provided by law.

3. Equal Opportunity (Exec. Order No. 11246, Sep. 24, 1965).

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), PNGC has been or is awarded nonexempt federal contracts and/or subcontracts that have an aggregate value in excess of \$25,000.00, PNGC shall comply with sections 3(b)(1) through 3(b)(11) below. Upon request, PNGC shall provide information necessary to determine the applicability of this clause.

(b) During performance of this Agreement, PNGC agrees as follows:

(1) PNGC shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

(2) PNGC shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: (1) employment; (2) upgrading; (3) demotion; (4) transfer; (5) recruitment or recruitment advertising; (6) layoff or termination; (7) rates of pay or other forms of compensation; and (8) selection for training, including apprenticeship.

(3) PNGC shall post in conspicuous places, available to employees and applicants for employment, the notices that explain this clause, such notices to be provided by the person designated in writing by Bonneville's Administrator with the authority to enter into, administer, modify, suspend or terminate this Agreement, make related determinations and findings and bind Bonneville only to the extent of delegated authority (Contracting Officer).

(4) PNGC shall, in all solicitations or advertisements for employees placed by or on behalf of PNGC, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(5) PNGC shall send, to each labor union or representative or of workers with which it has a collective bargaining agreement or other contract or understanding, the notice provided by the Contracting Officer advising the labor union or workers' representative of PNGC's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) PNGC shall comply with Executive Order No. 11246, Sep. 24, 1965 (30 Fed. Reg. 12319), as amended, and the rules, regulations and orders of the Secretary of Labor.

(7) PNGC shall furnish to Bonneville all information required by Executive Order No. 11246, as amended, and by the rules, regulations and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award of this contract, unless filed within 12 months preceding the date of the award of this contract.

(8) PNGC shall permit access to its books, records and accounts by Bonneville or the Office of Federal Contract Compliance Programs (OFCCP) for purpose of investigation to ascertain PNGC's compliance with such rules, regulations and orders.

(9) If the OFCCP determines that PNGC is not in compliance with this clause or any rule, regulation or order of the Secretary of Labor, this Agreement may be canceled, terminated, or suspended in whole or in part and PNGC may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order No. 11246, as amended. In addition, sanctions may be imposed and remedies invoked against PNGC as provided in Executive Order No. 11246, as amended, the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10) PNGC shall include the terms and conditions of sections 3(b)(1) through 3(b)(11) of this Exhibit in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) PNGC shall take such action with respect to any subcontract or purchase order as may direct as means of enforcing these terms and conditions, including sanctions for noncompliance: Provided, that if PNGC becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, PNGC may request the Government to enter into the litigation to protect the interest of the United States.

(c) Notwithstanding any other clause in this Agreement, disputes relative to this clause will be governed by the procedures in 41 CFR § 66-1.1.

4. Certification of Non-segregated Facilities (48 CFR § 22.810).



(a) PNGC certifies that it does not and will not maintain or provide for employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. PNGC agrees that a breach of this certification is a violation of section 3 (the Equal Opportunities Clause) of this Exhibit.

(b) PNGC agrees that it will (1) obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; (2) retain such certifications in its files (3) forward the following notice to such proposed subcontractors, except where the proposed subcontractors have submitted identical certifications of specific time periods:

"Notice to Prospective Subcontractors of Requirement for  
Certifications of Non-segregated Facilities.

"A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. This certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually)."

5. Officials Not to Benefit (41 U.S.C. § 22).

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement or to any benefit arising from it. However, this clause does not apply to this Agreement to the extent that this Agreement is made with a corporation for the corporation's general benefit.

6. Bonneville's Obligations Not General Obligations of the United States (16 U.S.C. § 839(j)).

None of the offerings of obligations, or promotional materials for such obligations, which may be offered by PNGC to fund its activities pursuant to this Agreement, shall be construed to be, general obligations of the United States, nor are such obligations intended to be or are they secured by the full faith and credit of the United States.

7. Small Business Act (15 U.S.C. §§ 631 and 637).

(a) It is the policy of the Government that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any federal agency.

(b) PNGC hereby agrees to carry out the policy set forth in 7(a) in awarding subcontracts to the fullest extent consistent with the efficient performance of this Agreement. PNGC further agrees to cooperate on any studies or surveys as may be conducted by the United States Small Business Administration or Bonneville as may be necessary to determine the extent of PNGC's compliance with this clause.

(c) As used in this agreement the term "small business concern" shall mean a small business as defined in section 3 of Small Business Act (15 U.S.C. § 632) and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

(1) which is at least 51 percent owned by one or more socially disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

- (2) whose management and daily business operations are controlled by one or more such individuals.

PNGC shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans and other minorities, or any other individual found to be disadvantaged by the United States Small Business Administration pursuant to section 8(a) of the Small Business Act.

- (d) PNGC acting in good faith may rely on written representations by its subcontractor regarding its status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

8. Other Statutes, Executive Orders and Regulations.

- (a) PNGC agrees to comply with the following statutes, executive orders and regulations to the extent applicable:

- (1) False Claims Act, 31 U.S.C. § 3729, et seq. Whoever makes or presents to any person or officer in the civil military or naval service of the United States, or to any department or agency thereof, any claim upon or against the United States, or any department or agency thereof, knowing such claim to be false, fictitious or fraudulent, shall be fined not more than \$10,000.00 or imprisoned not more than 5 years, or both;

- (2) Rehabilitation Act of 1973, 29 U.S.C. §793, as amended, Executive Order No. 11758, Jan. 15, 1974, and the regulations of the Secretary of Labor, 41 CFR Part 60-250, et seq., which concern affirmative action for handicapped workers;

(3) Vietnam Era Veterans Readjustment Assistance Act of 1972, 38 U.S.C. §§ 101, 102, 240, 241, 1502, 1504, 1507, as amended, and the clauses contained in 41 CFR Part 60-250, et seq., which concern affirmative action for disabled veterans and veterans of the Vietnam Era;

(4) Executive Order No. 11625, Oct. 13, 1971, and implementing regulations which concern utilization of small disadvantaged business concerns;

(5) Anti-Kickback Act, 41 U.S.C. § 51, et seq.; and

(6) Privacy Act of 1974, 5 U.S.C. § 552a.

(b) PNGC agrees to comply with requirements deemed necessary by Bonneville in order to implement Bonneville's obligations under the National Historic Preservation Act of 1966, U.S.C. §§ 470, et seq.

### **Bonneville's PNW AC Intertie Costs**

All costs in sections I through VIII of this Exhibit I shall be subject to the following provisions:

#### **PURPOSE**

Bonneville shall determine and calculate Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs with respect to Bonneville's PNW AC Intertie in accordance with this Exhibit I. None of Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, and End of Term Costs (each of the foregoing for purposes of this sentence, a Cost) shall include any other Cost.

#### **SOURCE OF INFORMATION AND COSTS**

Bonneville shall forecast in accordance with this Exhibit I the costs reflected in any Operating Plan pursuant to Schedules A through H of this Exhibit using the most detailed information available to Bonneville from its budget process at the time the forecast is made. Bonneville shall determine the actual costs reflected in any Operating Plan pursuant to Schedules A through H, using Bonneville's then existing accounting system in accordance with this Exhibit I. All costs reflected in Schedules A through H shall be net of credit.

Bonneville shall determine its overall overhead and overall indirect costs. A portion of Bonneville's overall overhead and indirect costs shall be allocated to such total system operations costs (pursuant to section I below), total system maintenance costs (pursuant to section II below), total capital costs (pursuant to sections III and IV below), Other Costs (pursuant to section V below), Contracts and Rates Costs (pursuant to section VI below), Power Scheduling Costs (pursuant to section VII below), and End of Term Costs (pursuant to section VIII below) using Bonneville's

normal allocation or distribution methodologies for such costs, as such methodologies may be changed by Bonneville from time to time. Such allocations or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's PNW AC Intertie than with respect to other transmission facilities.

Bonneville shall record its costs into its accounting systems in accordance with generally accepted accounting principles. For purposes of this Agreement, "generally accepted accounting principles" means the common set of accounting concepts, standards, and procedures that are adopted by entities (such as the utility industry) for purposes of financial statement disclosure.

Whenever Bonneville alters its accounting system or methods to permit costs referred to in this Exhibit I, which were previously allocated to functions and activities, to be directly assigned to function and activities, then in that event PNGC and Bonneville shall, in concert with the Capacity Owners other than PNGC, in good faith negotiate revisions to this Exhibit I to include such directly assigned costs.

## **COSTS**

### **I. Operations Costs**

#### **A. Operations Costs - Allocation Factor**

The allocation factor (Schedule A, line 3) used to determine the Allocated Direct Cost of Operations Cost, Indirect Cost of Operations Cost, and Overhead Cost of Operations Cost is the ratio of major facility units (MFUs) of Bonneville's PNW AC Intertie operated by Bonneville to MFUs of the Federal Columbia River Transmission System.

An MFU (Schedule A, lines 1 and 2) is any of the following major pieces of power system equipment which, at any given time, is installed on and is a part of the Federal Columbia River Transmission System: substation switchgear (such as power circuit breakers; potential devices; disconnects, load interrupters, hot-stick operated bus links; switching devices, circuit switchers, ground switches; and switchyard equipment terminals); protective

equipment (such as grounding devices; reactors; arrestors and resistors; voltage regulators; engine generators and motor generators; and high voltage fuses); transformation equipment (such as power transformers; diesel generators; grounding transformers; regulators and shunt reactors; synchronous condensers; and shunt or series capacitors); station equipment (such as switchyard lighting, batteries and chargers, air compressors, station service equipment, and lightening arrestors); instruments, control, and supervisory equipment (such as switchboards, instruments, and control panels; relay panels, transfer trip, and single-pole relaying; and oscillographs; fault detectors and locators; sequential events recorders, supervisory control, and data acquisition equipment; and indicating meters, instruments, and loggers); and equipment specific to direct current and static var compensator stations (such as mercury arc valves; thyristor systems; air handling packages; water control packages; harmonic filtering systems; motor control centers, such as fans, pumps, and dampening resistors; and valve damping resistors); or devices that perform similar types of functions.

Once each fiscal year, Bonneville shall count the number of MFUs on Bonneville's PNW AC Intertie (exclusive of facilities operated by others) (Schedule A, line 1) and the number of MFUs on the Federal Columbia River Transmission System (Schedule A, line 2). In calculating the forecast Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs, Bonneville shall use the most recent MFU count available at the time of such calculation in developing its initial Operating Plan for a given fiscal year. For each Operating Plan which is for the same fiscal year, Bonneville shall use the same MFU count in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**B. Operations Costs - Operations Functionalization Factor**

For each Operating Plan, Bonneville's total system operations direct cost, indirect cost and overhead cost (Schedule A, lines 7, 9, and 11) shall be adjusted by an operations functionalization factor (Schedule A, line 6) so that

Capacity Owners pay only transmission-related system operations costs. The operations functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using the costs developed for the last year of the rate period for which Bonneville has developed rates, the operations functionalization factor shall be the ratio of (a) Bonneville's total system operations cost functionalized to transmission (Schedule A, line 4) over (b) Bonneville's total system operations cost (Schedule A, line 5). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**C. Operations Costs - Allocated Direct Costs**

For each Operating Plan, Bonneville shall allocate its total system operations direct costs as set forth in Schedule A, lines 7 and 8, to determine Allocated Direct Costs of Operations Cost (Schedule A, line 8).

Schedule A, line 7, shall reflect Bonneville's total system operations direct costs for a fiscal year. Bonneville's total system operations direct costs for a fiscal year shall include all system operations expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: substation operations (which provides for, among other things, making equipment adjustments to maintain loads and voltages within acceptable limits, switching to deenergize lines and equipment during maintenance outages, isolating damaged equipment, restoring service to customers, visually inspecting equipment, and reading meters that record line and equipment loading and voltages), power system control and dispatching (which provides for, among other things, central dispatching, control, and monitoring of the electric operation



of the Federal transmission system; load, frequency, and voltage control of Federal generating plants; the operating of the system control and data computers at the Dittmer and Eastern Control Centers; and modification and maintenance of the operation-related computers), and operations standards and engineering (which provides for, among other things, analyzing system loads, voltage levels, outage information, stability levels, and other data; making policy recommendations for system operations; planning operations' practices, restoration plans and disturbance ports; development of control center requirements for centralized automation of substations and generation; and Bonneville's participation with other utilities in developing utility operating standards and guides); and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 8, shall reflect Allocated Direct Cost of Operations Cost.

**D. Operations Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system operations indirect costs as set forth in Schedule A, lines 9 and 10, to determine Indirect Costs of Operations Costs.

Schedule A, line 9, shall reflect Bonneville's total system operations indirect costs for a fiscal year. Bonneville's total system operations indirect costs for a fiscal year shall include all system operations indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: general supervision and management, office support, planning, budgeting, training, direction of facilities' operation, and other system operations activities undertaken by Bonneville that are

consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 10, shall reflect Indirect Cost of Operations Cost.

**E. Operations Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system operations overhead costs as set forth in Schedule A, lines 11 and 12, to determine Overhead Costs of Operations Costs.

Schedule A, line 11, shall reflect Bonneville's total system operations overhead costs for a fiscal year. Bonneville's total system operations overhead costs for a fiscal year shall include all system operations overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system operations overhead activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule A, line 12, shall reflect Overhead Cost of Operations Cost.

Schedule A, line 13, shall reflect Operations Cost.

**II. Maintenance Costs**

**A. Maintenance Costs - Power System Control Maintenance  
Functionalization Factor**

For each Operating Plan, the Power System Control (PSC) maintenance cost (Schedule B, line 4) shall be adjusted by a PSC maintenance functionalization factor (Schedule B, line 3). PSC maintenance is the testing, repair, and engineering support for Bonneville's communications and control systems. The PSC maintenance functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs for the last year of the rate period for which Bonneville has developed rates, the PSC functionalization factor shall be the ratio of (a) Bonneville's total PSC maintenance cost functionalized to transmission from such general rate case (Schedule B, line 1) over (b) Bonneville's total PSC maintenance cost from such general rate case (Schedule B, line 2).

**B. Maintenance Costs - Direct Costs**

The Direct Costs of Maintenance Costs for a fiscal year (Schedule B, line 7) shall be Bonneville's direct costs of maintaining Bonneville's PNW AC Intertie and shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities for maintenance of Bonneville's PNW AC Intertie: transmission line maintenance; substation maintenance; power system control

maintenance; nonelectric plant maintenance; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of Bonneville's PNW AC Intertie undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

With the exception of PSC maintenance costs, Bonneville shall specifically identify the direct costs of maintaining Bonneville's PNW AC Intertie (Schedule B, line 7). To determine PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6), the total PSC direct maintenance cost (Schedule B, line 4) shall be multiplied by (a) the PSC maintenance functionalization factor (Schedule B, line 3) and (b) the MFU allocation factor (Schedule B, line 5) set forth in Schedule A, line 3. The Direct Costs of Maintenance Costs (Schedule B, line 8) shall be the sum of (a) PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6) and (b) the direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost (Schedule B, line 7).

**C. Maintenance Costs - Allocation Factor**

The allocation factor (Schedule B, line 10) used to determine Indirect Cost of Maintenance Cost and Overhead Cost of Maintenance Cost shall be the ratio of the Direct Cost of Maintenance Cost (Schedule B, line 8) to Bonneville's total system maintenance direct cost (Schedule B, line 9), as described below.

Schedule B, line 9, shall reflect Bonneville's total system maintenance direct costs for a fiscal year. Bonneville's total system maintenance direct costs for a fiscal year shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred

by Bonneville in connection with the performance of any of the following activities: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; establishing, monitoring, and updating system maintenance standards, policies, and procedures; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of the Federal Columbia River Transmission System undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 10, shall reflect the percentage which shall be used to allocate Bonneville's total system maintenance indirect cost and total system maintenance overhead cost to Bonneville's PNW AC Intertie.

**D. Maintenance Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance indirect costs as set forth in Schedule B, lines 11 and 12, to determine Indirect Costs of Maintenance Costs.

Schedule B, line 11, shall reflect Bonneville's total system maintenance indirect costs for a fiscal year. Bonneville's total system maintenance indirect costs for a fiscal year shall include all system maintenance indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance any of the following activities: supervision and management, office support, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other system maintenance activities

undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 12, shall reflect Indirect Cost of Maintenance Cost.

**E. Maintenance Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance overhead costs as set forth in Schedule B, lines 13 and 14, to determine Overhead Costs of Maintenance Costs.

Schedule B, line 13, shall reflect Bonneville's total system maintenance overhead costs for a fiscal year. Bonneville's total system maintenance overhead costs for a fiscal year shall include all system maintenance overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system maintenance overhead activities undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule B, line 14, shall reflect Overhead Cost of Maintenance Cost.

Schedule B, line 15, shall reflect Maintenance Cost.

**III. Replacement Costs and Reinforcement Costs**

**A. Replacement Costs and Reinforcement Costs - Direct Costs**

The Direct Costs for Replacements and Reinforcements for a fiscal year (Schedule C, line 1) shall be Bonneville's direct capital costs for Replacements and Reinforcements for such fiscal year and shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, land, materials and equipment, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of the following activities: planning, environmental analyses and mitigation, survey, design, land, materials and equipment, turnkey contracts, contract construction, force account construction, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council. The Direct Costs for any Replacement or Reinforcement for a fiscal year shall also include the costs of removal and any salvage credits with respect to any PNW AC Intertie facility removed on account of such Replacement or Reinforcement.

**B. Replacement Costs and Reinforcement Costs - Indirect Costs and Overhead Costs**

For each Replacement and Reinforcement project, the Indirect Costs and Overhead Costs for Replacements and Reinforcements (Schedule C, line 2) shall be allocated or distributed to such Replacements and Reinforcements using the indirect and overhead allocation and distribution methodologies

employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Replacements and Reinforcements are under construction. Schedule C, line 2, shall reflect the Indirect Costs and Overhead Costs of Replacements and Reinforcements.

Indirect Costs of Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel expenses, service contracts, consulting contracts, administration of materials, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: supervision, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Overhead Costs for Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other costs, each of which being which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services;



area offices; operations, maintenance, and construction; and engineering); and (c) other replacement and reinforcement activities undertaken by Bonneville that are consistent with replacement and reinforcement activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

**C. Replacement Costs and Reinforcement Costs - Allowance for Funds Used During Construction (AFUDC)**

Schedule C, line 3, shall reflect AFUDC for Replacements and Reinforcements. At the beginning of each fiscal year, Bonneville shall calculate the AFUDC rate for such fiscal year. Bonneville shall apply such AFUDC rate monthly to the costs in accounts for construction work in progress for Replacements and Reinforcements.

**D. Replacement Costs and Reinforcement Costs - Interest**

Schedule C, line 4, shall reflect the interest cost payable by PNGC pursuant to this Agreement with respect to any Replacement or Reinforcement. Such interest cost for any Replacement or any Reinforcement shall be simple interest calculated at a rate equal to the weighted average interest rate on Bonneville's then outstanding bonds or other debt instruments and such interest shall accrue from the date Bonneville stops accruing AFUDC (approximately the date the work order for such Replacement or such Reinforcement is closed) with respect to such Replacement or such Reinforcement to the due date of the monthly power bill containing the charge for such Replacement or such Reinforcement.

**IV. General Plant Costs**

For each Operating Plan, Bonneville shall adjust, amortize, and allocate Bonneville's total general plant investment (as described below) and Bonneville's Dittmer control equipment investment as set forth in Schedule D, lines 1 through 11, to determine General Plant Cost.

Schedule D, line 1, shall reflect for a fiscal year Bonneville's total cumulative general plant investment. Bonneville's total general plant investment shall include Bonneville's investments in any of the following: land-general plant, structures/improvements-general plant, office furniture and equipment, transportation equipment, stores equipment, tools/shop/garage equipment, laboratory equipment, power operated equipment, communication equipment, miscellaneous equipment (including equipment or apparatus used in Bonneville's utility operations which are not includable in any other general plant investment category), and other similar investment made by Bonneville that is consistent with general plant investment made by utilities in the Western Systems Coordinating Council.

Schedule D, line 2, shall reflect for a fiscal year Bonneville's cumulative investment in Dittmer control equipment.

Schedule D, line 3, shall reflect Bonneville's total general plant investment and Bonneville's Dittmer control equipment investment functionalized to generation using the methodology for functionalizing general plant as set forth in Bonneville's general rate case most recently approved by FERC on an interim basis.

Schedule D, line 4, shall reflect any general plant investment recovered from all Capacity Owners under the CO-94 rate as such general plant investment is unitized by Bonneville; provided, however, for the first two Operating Plans Bonneville shall estimate the amount of the general plant investment included in the Initial Capacity Ownership Price, which estimate shall be reflected in Schedule D, line 4, and Bonneville shall modify such Operating Plans by December 1995, or as soon as practicable thereafter, to reflect in Schedule D, line 4, the actual general plant investment included in the Adjusted Capacity Ownership Price.

Schedule D, line 5, shall reflect any general plant investment recovered from Capacity Owners pursuant to section 5 for Upgrades. The agreements

referred to in subsection 5(d) and subparagraph 5(e)(3)(B) shall specify the portion of costs of an Upgrade that will be considered general plant investment.

Schedule D, line 6, shall reflect Bonneville's adjusted general plant investment functionalized to transmission and shall be calculated by adding line 1 and line 2, and from the sum of line 1 and line 2 subtracting line 3, line 4, and line 5.

Schedule D, line 7, shall reflect Bonneville's annual cost of Bonneville's adjusted general plant investment functionalized to transmission (Schedule D, line 6). Such annual cost shall be the sum of the annual interest and amortization amounts for each category of adjusted general plant investment. The annual interest and amortization amounts for each category shall be calculated by using the investment amounts for each such category, the weighted average interest rate for all Bonneville then outstanding bonds, and the average service lives for each such category from Bonneville's most recent depreciation study. If Bonneville changes its practice of financing general plant investment with bonds, the interest rate used in the calculation referred to in the immediately preceding sentence shall reflect the weighted average interest rate for all of Bonneville's then outstanding debt instruments.

Schedule D, line 8, shall reflect for a fiscal year Bonneville's total cumulative transmission plant-in-service investment (not including general plant investment). Bonneville's total transmission plant-in-service investment shall include Bonneville's investment in any of the following items reflected as total transmission plant-in-service (not including general plant investment) in the Segmentation Study (from Bonneville's general rate case most recently approved by FERC on an interim basis: land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant

investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

Schedule D, line 9, shall be the annual cost ratio of Bonneville's PNW AC Intertie transmission-related general plant derived by dividing Schedule D, line 7, by Schedule D, line 8.

Schedule D, line 10, shall reflect Bonneville's PNW AC Intertie investment. Bonneville's PNW AC Intertie investment shall include Bonneville's investment in any of the following items reflected as Bonneville's PNW AC Intertie plant-in-service in the Segmentation Study from Bonneville's general rate case most recently approved by FERC on an interim basis (or the successor to the Segmentation Study, as determined by Bonneville): land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

**V. Other Costs**

For each Operating Plan, Bonneville shall include Other Costs associated with Bonneville's PNW AC Intertie for a fiscal year. Such Other Costs (Schedule E, line 3) for a fiscal year shall include for such fiscal year any of the following: (1) the costs of operation; maintenance; capital replacements, reinforcements, additions, betterments, renewals; or related costs which Bonneville is obligated to pay pursuant to the Northwest Intertie Agreements or other contracts referred to in subsection 8(b) of this Agreement; and (2) costs paid by Bonneville including monetary judgments, settlements, binding awards, non-contract penalties, contract penalties, liquidated damages, or forfeiture costs, and Bonneville's costs related to such monetary judgments, settlements, binding awards, non-contract penalties, contract penalties,

liquidated damages, or forfeiture costs assessed against or incurred by Bonneville as a facilities owner of, or the operator of, the PNW AC Intertie; provided, however, that PNGC shall not be obligated to pay a share of any such costs that are not properly allocated to Bonneville's PNW AC Intertie.

Bonneville shall forecast its share of operations, maintenance, capital, and related costs for activities that PacifiCorp performs on Bonneville/PacifiCorp jointly-owned PNW AC Intertie facilities based on forecasts received from PacifiCorp or on actual costs for the most recent 12 consecutive month period prior to preparation of an Operating Plan.

**VI. Contracts and Rates Costs**

**A. Contracts and Rates Costs - Functionalization Factor**

For each Operating Plan, Bonneville's total contracts and rates direct costs, indirect costs, and overhead costs (Schedule F, lines 5, 6, and 7) shall be adjusted by a contracts and rates functionalization factor (Schedule F, line 3). The contracts and rates functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the contracts and rates functionalization factor shall be the ratio of (a) Bonneville's total transmission-related contracts and rates cost (Schedule F, line 1) over (b) Bonneville's total contracts and rates cost (Schedule F, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Contracts and Rates Cost.

**B. Contracts and Rates Costs - Allocation Factor**

The allocation factor (Schedule F, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Contracts and Rates Costs - Total Contracts and Rates Costs**

Bonneville's total contracts and rates costs for a fiscal year (Schedule F, line 8) shall include Bonneville's expenses (including direct, indirect, and

overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: rate filings with FERC, development of rates customers pay Bonneville for electric power and for wheeling their own power on Bonneville's transmission system; negotiation, administration, and coordination of contracts for power sales, power exchanges, conservation, wheeling and resource services; and analyzing, processing, and issuing all customer power bills; and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule F, line 9, shall reflect Contracts and Rates Cost.

**VII. Power Scheduling Costs**

For each Operating Plan, Bonneville's total power scheduling direct costs, indirect costs, and overhead costs (Schedule G, lines 5, 6, and 7) shall be adjusted by a power scheduling functionalization factor (Schedule G, line 3). The power scheduling functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the power scheduling functionalization factor shall be the ratio of (a) Bonneville's total transmission-related power scheduling cost (Schedule G, line 1) over (b) Bonneville's total power scheduling cost (Schedule G, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Power Scheduling Cost.

**B. Power Scheduling Costs - Allocation Factor**

The allocation factor (Schedule G, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Power Scheduling Costs - Total Power Scheduling Costs**

Bonneville's total power scheduling costs for a fiscal year (Schedule G, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: scheduling and marketing power to Bonneville customers and interconnected utilities, forecasting the hourly power requirements of Bonneville customers and the interchange of power with the region's interconnected electric utilities and with utilities outside the region, scheduling power to be generated at each Federal plant, weather and streamflow forecasting, controlling the reservoirs, implementing the intertie access policy, coordinating power production with the multi-purpose operation of the Federal power system, seasonal load/resource planning, developing current short-term operating plans, short-term marketing of Bonneville's surplus firm power, exchanges, and nonfirm energy, and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule G, line 9, shall reflect Power Scheduling Cost.

**VIII. End of Term Costs**

When all facilities of the PNW AC Intertie are determined, in accordance with Northwest Intertie Agreements, to be no longer operable, Bonneville shall include a forecast of all Bonneville's costs associated with

decommissioning the PNW AC Intertie and credits resulting from such decommissioning in the Operating Plan for each fiscal year that such End of Term Costs are to be incurred. Bonneville's End of Term Costs for a fiscal year (Schedule H, line 4) shall include Bonneville's costs (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: decommissioning, razing structures, disposal of debris, site restoration, meeting all requirements of Federal, state, or local applicable law relating to the foregoing activities, and other decommissioning activities undertaken by Bonneville that are consistent with decommissioning activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.



**Schedule A for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1		_____	
MFUs of the FCRTS	2		_____	
Allocation factor (Line 1/Line 2)	3		_____	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from rate case	4		_____	
Bonneville's total system operations cost from rate case	5		_____	
Operations functionalization factor (Line 4/Line 5)	6		_____	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	_____	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	_____	_____	_____

Exhibit I, Schedule A  
 Contract No. DE-MS79-94BP94523  
 Pacific Northwest Generating Cooperative  
 Effective on the effective date of Exhibit B

	Line No.	Forecast	Actual	Difference
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	_____	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	_____	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	_____	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	_____	_____	_____
<b>F. Operations Cost (Lines 8 + 10 + 12)</b>	13	_____	_____	_____

**Schedule B for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC)</b>				
<b>Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1		_____	
Bonneville's total PSC maintenance cost from rate case	2		_____	
PSC maintenance functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	_____	_____	_____
MFU Allocation Factor (Schedule A, line 3)	5		_____	
PSC direct maintenance cost for Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	_____	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	_____	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	_____	_____	_____

**C. Allocation Factor**

Bonneville's total system maintenance direct cost	9			
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10			

**D. Indirect Cost**

Bonneville's total system maintenance indirect cost	11			
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12			

**E. Overhead Cost**

Bonneville's total system maintenance overhead cost	13			
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14			

**F. Maintenance Cost  
(Lines 8 + 12 + 14)**

15			
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**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>	5	_____	_____	_____

**Notes:**

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.  
 Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

**Schedule D for FY XXXX**

	Line No.	Allocated Actual
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment	1	_____
Bonneville's Dittmer control equipment investment	2	_____
General plant investment of lines 1 and 2 functionalized to generation	3	_____
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price	4	_____
General plant investment recovered from Capacity Owners for Upgrades	5	_____
Adjusted general plant investment functionalized to transmission (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	_____
BPA total annual cost of Line 6 general plant investment	7	_____
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study	8	_____
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8)	9	_____
Bonneville's PNW AC Intertie investment from Segmentation Study	10	_____
<b>General Plant Cost (Line 9 * Line 10)</b>	11	_____

**Schedule E for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	_____	_____	_____
<b>B. Other PNW AC Intertie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	_____	_____	_____

Schedule F for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates Costs</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1		_____	
Total contracts and rates cost from rate case	2		_____	
Contracts and rates cost functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4		_____	
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	_____	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	_____	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	_____	_____	_____
<b>D. Contracts and Rates Cost (Line 8 * Line 3 * Line 4)</b>	9	_____	_____	_____



**Schedule G for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VII. Power Scheduling Costs</b>				
<b>A. Power Scheduling Functionalization Factor</b>				
Transmission-related power scheduling costs from rate case	1		_____	
Total power scheduling cost from rate case	2		_____	
Power scheduling cost functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4		_____	
<b>C. Total Power Scheduling Costs</b>				
Power scheduling direct costs	5	_____	_____	_____
Power scheduling indirect costs	6	_____	_____	_____
Power scheduling overhead costs	7	_____	_____	_____
Bonneville's total power scheduling costs (Line 5 + Line 6 + Line 7)	8	_____	_____	_____
<b>D. Power Scheduling Cost (Line 8 * Line 3 * Line 4)</b>	9	_____	_____	_____

Schedule H for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	_____	_____	_____
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	( _____ )	( _____ )	( _____ )
<b>D. End of Term Costs</b>				
	4	_____	_____	_____

**PNGC's Initial Transaction with California Utility**

Name of parties: PNGC / Turlock Irrigation District

Term of Contract: December 31, 2018

Date of Execution: November 10, 1992

Amount of Transaction (MW): 52 MW

**PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT**

executed by the

**UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

acting by and through the

**BONNEVILLE POWER ADMINISTRATION**

and

**CITY OF TACOMA, DEPARTMENT OF PUBLIC UTILITIES**

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**This PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT** (Agreement) is entered into as of September 27, 1994, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville or BPA) and the CITY OF TACOMA, DEPARTMENT OF PUBLIC UTILITIES (Tacoma), a municipal corporation operating and existing under the laws of the state of Washington. Each of Bonneville and Tacoma is sometimes referred to individually in this Agreement as "Party"; Bonneville and Tacoma are sometimes referred to together in this Agreement as "Parties."

**W I T N E S S E T H :**

**WHEREAS** Bonneville, Portland General Electric Company (Portland), and PacifiCorp Electric Operations (PacifiCorp) planned and constructed improvements and additions to the Northwest portion of the PNW-PSW Intertie; and

**WHEREAS** such construction was completed in December 1993 resulting in 1600 MW of additional PNW AC Intertie Rated Transfer Capability in a north-to-

south direction and 1225 MW of additional PNW AC Intertie Rated Transfer Capability in a south-to-north direction; and

WHEREAS pursuant to the Northwest Intertie Agreements, Bonneville operates the PNW AC Intertie, in coordination with Portland and PacifiCorp, as a single system so as to maximize PNW AC Intertie Rated Transfer Capability and Operational Transfer Capability consistent with Prudent Utility Practice; and

WHEREAS Bonneville has developed a proposal to offer to PNW non-Federal scheduling utilities and joint agencies capacity ownership rights in 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability; and

WHEREAS such proposal has been studied in Bonneville's Final Non-Federal Participation Environmental Impact Statement, dated January 1994, and was the selected alternative in the Administrator's Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville and Tacoma executed a Memorandum of Understanding, DE-MS79-91BP93468, dated September 23, 1991, which, among other things, sets forth the principles for Tacoma's capacity ownership rights in Bonneville's PNW AC Intertie; and

WHEREAS interest expressed in capacity ownership by PNW non-Federal scheduling utilities and joint agencies exceeded the 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability offered by Bonneville, and as a result Bonneville developed and applied an allocation methodology selected in the Administrator's Capacity Ownership Record of Decision, dated March 25, 1994; and

WHEREAS concurrent with the execution of this Agreement, Bonneville and Tacoma are executing Contract No. DE-MS79-94BP93936 to provide Tacoma with, among other things, network wheeling between the John Day Substation and Tacoma's transmission system; and

WHEREAS Bonneville is authorized pursuant to law to dispose of electric power generated at various Federal hydroelectric projects in the PNW, or acquired from other resources, to construct and operate transmission facilities, to provide

transmission and other services, and to enter into agreements to carry out such authority;

NOW, THEREFORE, Bonneville and Tacoma agree as follows:

**1. DEFINITIONS**

- (a) "Adjusted Capacity Ownership Price" means the price calculated pursuant to column 2, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (b) "Adjusted Lump Sum Payment" means the Adjusted Capacity Ownership Price multiplied by Tacoma's Capacity Ownership Share (in kilowatts), as described with more particularity in section D of Exhibit D.
- (c) "Allocated Direct Costs" means for each fiscal year the Operations Cost as allocated to Bonneville's PNW AC Intertie in accordance with section I.C of Exhibit I for such fiscal year. Allocated Direct Costs are not included in Direct Costs, Indirect Costs, or Overhead Costs.
- (d) "Allowance for Funds Used During Construction" or "AFUDC" constitutes interest on the funds used for utility plant under construction. The AFUDC rate approximates the cost of money being used to finance current construction work in progress and is calculated in accordance with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors. AFUDC shall be capitalized in accordance with Bonneville's accounting procedures and practices, and in any event consistent with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors.
- (e) "Billing Provisions" means those provisions set forth in Exhibit B, Part B.

- (f) "Bonneville's PNW AC Intertie" means facilities of the PNW AC Intertie owned partially or entirely by Bonneville specified in Exhibit F together with the equipment and facilities installed in or connected to such facilities specified in Exhibit F, to the extent such facilities are necessary for the transmission of power on the PNW AC Intertie.
- (g) "Bonneville's PNW AC Intertie Operational Transfer Capability" means Bonneville's PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and by operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (h) "Bonneville's PNW AC Intertie Rated Transfer Capability" means Bonneville's share of the PNW AC Intertie Rated Transfer Capability as determined in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (i) "Capacity Owner" means each of the parties listed in Exhibit G to the extent that such party has entered into a Capacity Ownership Agreement.
- (j) "Capacity Ownership Agreement" means, in the singular, this Agreement or the agreement, substantially identical to this Agreement, entered into by each Capacity Owner (other than Tacoma) and Bonneville, and in the plural, this Agreement and all such substantially identical agreements entered into respectively by



Capacity Owners (other than Tacoma) and Bonneville, as each such agreement may be amended or supplemented from time to time pursuant to the terms of such agreement, concerning (among other things) the rights of such Capacity Owner with respect to the PNW AC Intertie.

- (k) "Capacity Ownership Percentage" means, as of the Effective Date, in the singular, the percentage of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Tacoma pursuant to this Agreement, which percentage is determined by dividing Tacoma's Capacity Ownership Share as of the Effective Date by Bonneville's PNW AC Intertie Rated Transfer Capability as of the Effective Date (such percentage being subject to change pursuant to the terms of this Agreement), and in the plural, the percentages of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which percentages are set forth in Exhibit G (each of such percentages being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (l) "Capacity Ownership Rights" means the rights of Tacoma pursuant to this Agreement.
- (m) "Capacity Ownership Share" means, except as such term is otherwise used in sections III.A and III.B of the CO-94 rate set forth in Exhibit A on the Effective Date, in the singular, the MW amount of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Tacoma pursuant to this Agreement, which MW amount is set forth in Exhibit C (such amount being subject to change pursuant to the terms of this Agreement), and in the plural, the MW amounts of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which amounts are set forth in Exhibit G (each of such amounts being subject to

change pursuant to the respective terms of such Capacity Ownership Agreements).

- (n) "Committee" has the meaning set forth in subsection 12(a).
- (o) "Contracts and Rates Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville's total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville's PNW AC Intertie.
- (p) "Direct Costs" means any costs incurred by Bonneville which are readily identifiable, or obviously traceable to, and directly benefit, a specific Bonneville program, project, or other cost objective. Direct Costs are not included in Allocated Direct Costs, Overhead Costs, or Indirect Costs. The methods for determining Direct Costs for Bonneville's PNW AC Intertie are set forth in sections II.B and III.A of Exhibit I.
- (q) "Effective Date" means the date as of which this Agreement becomes effective pursuant to section 2.
- (r) "End of Term Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.
- (s) "FERC" means the Federal Energy Regulatory Commission or its regulatory successor.
- (t) "General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The

method for determining General Plant Cost is set forth in section IV of Exhibit I.

- (u) "GTRSP" or "GTRSPs" means Bonneville's General Transmission Rate Schedule Provisions, set forth in Exhibit A, as such provisions may be revised from time to time.
- (v) "Indirect Costs" means any costs incurred by Bonneville which indirectly benefit and are directly charged to a specific Bonneville program, project, or other cost objective for which a Direct Cost or Allocated Direct Cost is charged. Indirect Costs shall not be included in Allocated Direct Costs, Direct Costs, or Overhead Costs. The methods for determining Indirect Costs for Bonneville's PNW AC Intertie are set forth in sections I.D, II.D, and III.B of Exhibit I.
- (w) "Initial Capacity Ownership Price" means \$215 per kilowatt, the calculation of which charge is set forth in column 1, section B of Exhibit D and in section III.A of the CO-94 rate in Exhibit A.
- (x) "Initial Lump Sum Payment" means the Initial Capacity Ownership Price multiplied by Tacoma's Capacity Ownership Share (in kilowatts), as described with more particularity in section C of Exhibit D.
- (y) "Interconnection Agreement" means the "Interim Interconnection Agreement Between Certain California-Oregon Transmission Project Participants and Northwest Participants," Contract No. DE-MS79-91BP93158, as amended or superseded.
- (z) "Joint AC Intertie" is as defined in the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (aa) "Joint Intertie Scheduling Office" or "JISO" means the group of Bonneville, Portland, and PacifiCorp schedulers, which, among other things, accepts PNW-PSW Intertie Preschedules.

- (bb) "Maintenance Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville's PNW AC Intertie, maintenance Indirect Costs for Bonneville's PNW AC Intertie, and maintenance Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.
- (cc) "MW" means megawatt.
- (dd) "Northwest Intertie Agreements" means the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (ee) "Operating Plan" means, subject to subsection 13(o), with respect to any fiscal year commencing on or after the day on which the annual costs rate set forth in Exhibit B has been approved on an interim or final basis by FERC, the written document containing the information described in subsection 13(c), as such document may be amended pursuant to section 13, 14, or 16.
- (ff) "Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.
- (gg) "Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

- (hh) "Overhead Cost" means administrative and general costs, support service costs, or other costs similar in nature which are distributed or allocated by Bonneville to Bonneville's PNW AC Intertie. Overhead Costs are not included in Direct Costs, Allocated Direct Costs, or Indirect Costs. The methods for determining Overhead Costs are set forth in sections I.E, II.E, and III.B of Exhibit I.
- (ii) "Pacific Northwest" or "PNW" means the area defined as the Pacific Northwest in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. section 839a(14).
- (jj) "Pacific Time" means Pacific Standard Time and Pacific Daylight Time as each is in force.
- (kk) "PNW AC Intertie" means facilities including, but not limited to, the following: two 500 kV transmission lines extending from John Day Substation to the Malin Substation and to the California-Oregon border; portions of John Day, Grizzly, and Malin Substations and the Sand Springs, Fort Rock, and Sycan Compensation Stations; a portion of the Buckley-Summer Lake 500 kV transmission line and associated substations; portions of the Buckley-Marion and Marion-Alvey 500 kV transmission lines and associated facilities; a portion of Bonneville's capacity rights in the Summer Lake-Malin 500 kV transmission line; Bonneville's rights in the Meridian-Malin 500 kV transmission line and Bonneville's share of ownership of the Alvey-Meridian 500 kV transmission line; Captain Jack Substation; the 500 kV transmission line from Captain Jack Substation to the California-Oregon border; and any modifications, additions, improvements, or other alterations thereto.
- (ll) "PNW AC Intertie Operational Transfer Capability" means the PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as

amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.

- (mm) "PNW AC Intertie Rated Transfer Capability" means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.
- (nn) "Pacific Northwest-Pacific Southwest Intertie" or "PNW-PSW Intertie" means the DC transmission line between the Celilo Converter Station in The Dalles, Oregon, and the Sylmar Converter Station near Los Angeles, California, the PNW AC Intertie, and the AC Intertie in California including, without limitation, the California-Oregon Transmission Project.
- (oo) "Pacific Northwest Non-Federal Utility" means any electric utility that serves retail load in the region consisting of (1) the states of Oregon, Washington, and Idaho, the portion of the state of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River Basin drainage basin, and (2) any contiguous areas, not in excess of seventy-five air miles from the area referred to in (1) above, which areas are a part of the service area of a rural electric cooperative power customer served by Bonneville on the effective date of the Pacific Northwest Power Planning and Conservation Act (P.L. 96-501) having a distribution system from which it serves both within and without such region.
- (pp) "Power Scheduling Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit

I to determine Power Scheduling Costs for Bonneville's PNW AC Intertie.

- (qq) "Preschedule" means the schedule submitted by Tacoma to the JISO pursuant to paragraph 4(b)(1) for transactions prepared each Working Day for the period beginning 2400 hours of the current Working Day through 2400 hours of the next Working Day.
- (rr) "Prudent Utility Practice" means, at any particular time, the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto that would achieve the desired result or, if there are no such practices, methods, and acts, the practices, methods, and acts which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to achieve the desired result consistent with reliability and safety.
- (ss) "Real-time Schedule" means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed by the JISO to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by Tacoma.
- (tt) "Reinforcement" means any transmission plant modification, addition, improvement, or other alteration to the Federal Columbia River Transmission System which is not a Replacement or an Upgrade and which is made pursuant to subsection 7(c).
- (uu) "Reinforcement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Tacoma for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on

account of such Reinforcement. Reinforcement Costs do not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

- (vv) "Replacement" means for any transmission plant addition, betterment, renewal and equipment or facility that takes the place of or adds to any existing equipment or facility on Bonneville's PNW AC Intertie that does not increase Bonneville's PNW AC Intertie Rated Transfer Capability.
- (ww) "Replacement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Tacoma for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Replacement. General Plant Cost is not included in Replacement Costs. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.
- (xx) "Revised Adjusted Capacity Ownership Price" means a price calculated pursuant to column 3, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (yy) "Revised Adjusted Lump Sum Payment" means a Revised Adjusted Capacity Ownership Price multiplied by Tacoma's Capacity Ownership Share (in kilowatts), as described with more particularity in section E of Exhibit D.
- (zz) "Scheduler" means the person authorized by a Party to accept or submit schedules pursuant to section 4 and authorized to implement,



interpret, and vary the scheduling procedures set forth in such section pursuant to this Agreement.

- (aaa) "Scheduling Percentage" means the percentage of the PNW AC Intertie Rated Transfer Capability owned by Tacoma pursuant to this Agreement, which percentage is determined by dividing Tacoma's Capacity Ownership Share by the PNW AC Intertie Rated Transfer Capability.
- (bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of Tacoma's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour.
- (ccc) "Scheduling Utility" means either (i) a Pacific Northwest Non-Federal Utility that serves a retail service area and operates a generation control area, or (ii) a Pacific Northwest Non-Federal Utility designated by Bonneville as a "computed requirements customer" or its equivalent.
- (ddd) "Term" means the period of effectiveness of this Agreement set forth in subsection 2(a).
- (eee) "Third AC Intertie" means the Third AC Intertie Project, which project increased the PNW AC Intertie Rated Transfer Capability by 1600 MW in a north-to-south direction and by 1225 MW in a south-to-north direction.
- (fff) "Third AC Intertie Project" means the Third AC Intertie System Reinforcement and the construction of the Alvey-Meridian 500 kV transmission line and of facilities related to such transmission line during the period from July 1984 through December 1993.
- (ggg) "Third AC Intertie System Reinforcement" means the improvements, additions and modifications to the PNW AC Intertie constructed during the period from July 1984 through December 1993 plus the construction of the Captain Jack substation and of facilities related to

such substation during the period from July 1984 through December 1993.

- (hhh) "Upgrade" means any MW increase to Bonneville's PNW AC Intertie Rated Transfer Capability which arises from or is related to an increase to the PNW AC Intertie Rated Transfer Capability.
- (iii) "Working Day" means any day other than Saturday, Sunday, and a legal holiday recognized by the Federal government or Tacoma.

## 2. **TERM AND TERMINATION**

- (a) This Agreement shall become effective as of the date of execution and delivery of this Agreement by both of the Parties. This Agreement shall continue in effect so long as any facilities of the PNW AC Intertie are in existence and operable, unless otherwise earlier terminated by written agreement of both of the Parties or unless terminated pursuant to the terms of this Agreement. All liabilities incurred under this Agreement shall be preserved until satisfied.
- (b) Notwithstanding subsection 2(a), no Capacity Ownership Rights may be exercised by Tacoma until payment is made by Tacoma pursuant to paragraph 9(a)(1) and received by Bonneville.
- (c) If Bonneville does not receive the payment from Tacoma pursuant to paragraph 9(a)(1), then Bonneville shall have the option to terminate this Agreement by delivering to Tacoma written notice of such termination.
- (d) Notwithstanding subsection 2(a), if Bonneville incurs End of Term Costs, the following provisions of this Agreement, and all rights and obligations thereunder, shall continue in full force and effect until Bonneville renders its final bill to Tacoma pursuant to subsection 9(b), unless this Agreement is earlier terminated by mutual agreement of the Parties: subsections 2(b), 2(c), and 2(d), sections 1, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, and 23, and Exhibits A, B, C, D, F, G, H,

and I. All liabilities incurred under such provisions of this Agreement shall be preserved until satisfied.

- (e) If this Agreement has not become effective pursuant to subsection 2(a) within 12 months following the date upon which Bonneville executes and delivers this Agreement to Tacoma, this Agreement shall be void ab initio and of no force or effect.

### 3. **CAPACITY RIGHTS**

- (a) **Purchase and Sale of Capacity**

Pursuant to the terms and conditions of this Agreement, Tacoma purchases from Bonneville and Bonneville sells to Tacoma the Capacity Ownership Rights.

- (b) **Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, Tacoma shall notify Bonneville in writing of Tacoma's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and Tacoma shall have the right to utilize its Scheduling Share pursuant to the paragraph Tacoma elects. Prior to Bonneville's receipt of such notification, Tacoma shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If Tacoma fails to make an election within the prescribed time period, Tacoma shall be deemed to have elected the option set forth in paragraph 3(b)(1).

- (1) **No Third Party Wheeling**

- (A) Except as expressly provided in subparagraph 3(b)(1)(B), Tacoma shall not use its Scheduling Share to transmit power or energy (except for inadvertent power flows) that Tacoma does not own at the California-Oregon border or for which transmission Tacoma receives any revenue that would be reportable in

Tacoma's accounting system where revenues received for wheeling for other entities would be booked.

(B) If Tacoma's Scheduling Share is not fully utilized by Tacoma in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions over the unused portion of Tacoma's Scheduling Share for such hour but no longer than such hour. Tacoma shall be compensated for such wheeling solely by the payments as described in sections 3(b)(1)(B)(i) and (ii) below. For purposes of this subparagraph 3(b)(1)(B), Tacoma's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Tacoma has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour on any MW amount of Tacoma's Scheduling Share. In return for Tacoma's Scheduling Share being made available to Bonneville pursuant to this subparagraph 3(b)(1)(B), Bonneville shall pay Tacoma

- (i) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a north-to-south direction under the IS-93 rate, section II.A, or its successor to other entities in such hour, and (2) the ratio of Tacoma's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour, and
- (ii) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a south-to-

north direction under the IS-93 rate, section II.A or its successor to other entities in such hour, and (2) the ratio of Tacoma's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour; provided, however, that Bonneville shall not be required to make payments for such south-to-north wheeling pursuant to this section 3(b)(1)(B)(ii) earlier than two years after the Effective Date.

Bonneville shall make payments pursuant to this subparagraph 3(b)(1)(B) in accordance with paragraph 9(f)(1).

- (C) During an outage resulting from maintenance activities on the PNW AC Intertie performed by Bonneville other than maintenance activities undertaken due to emergencies or uncontrollable forces, the following shall apply:
- (i) When Tacoma's Scheduling Share for any given hour is reduced as a consequence of such outage which reduces in Bonneville's PNW AC Intertie Operational Transfer Capability such that Tacoma's Scheduling Share for such hour is less than the MW amount of the aggregate of Tacoma's net firm transactions identified by Tacoma to Bonneville pursuant to section 3(b)(1)(C)(iv) for such hour, Bonneville shall, subject only to sections 3(b)(1)(C)(ii) and (iii) and to the immediately succeeding sentence, wheel on a firm basis that portion of Tacoma's firm transactions that equals the difference between Tacoma's Scheduling Share for such hour and

the MW amount of the aggregate of Tacoma's firm transactions for such hour up to, but not in excess of, Tacoma's Capacity Ownership Share. Notwithstanding the foregoing, Bonneville shall only be obligated to provide such wheeling to the extent that each party with whom Tacoma is conducting such firm transactions has received a sufficient AC Intertie capacity allocation in California to accommodate such transactions. Tacoma shall pay the IS-93 rate, section II.A, or its successor for such wheeling pursuant to this section 3(b)(1)(C)(i) in accordance with subsection 9(d).

- (ii) Bonneville shall not be obligated to provide such wheeling to Tacoma pursuant to section 3(b)(1)(C)(i) if no PNW AC Intertie Operational Transfer Capability is available to Bonneville after Bonneville has scheduled all of Bonneville's Firm Schedules. For purposes of this section, "Bonneville's Firm Schedules" shall mean schedules for assured delivery or other firm transmission contracts pursuant to the Long-Term Intertie Access Policy, as revised or amended, or its successor, and schedules for Bonneville's firm power and energy sales and exchange transactions.
- (iii) Bonneville shall not be obligated to provide such wheeling to Tacoma pursuant to section 3(b)(1)(C)(i) until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to Tacoma or until October 1, 1994, whichever occurs sooner.

(iv) No later than ten Working Days prior to the first day of deliveries under a firm transaction, Tacoma shall identify such firm transaction to Bonneville. Tacoma shall identify such firm transaction to Bonneville by providing to Bonneville a copy of Tacoma's contract for such firm transaction (after information considered proprietary by Tacoma has been redacted by Tacoma). Bonneville shall review such contract to verify that the transaction is firm. If Tacoma and its contractor represent or state in writing that the transaction set forth in their contract is firm, Bonneville shall accept that written representation or statement as dispositive of the question of whether such transaction is firm. Implementation of such procedures in this section 3(b)(1)(C)(iv) may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written.

(D) Tacoma retains any and all rights of access which it would otherwise have to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(2) **Third Party Wheeling**

(A) Tacoma may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by Tacoma. Tacoma shall have no obligation under this Agreement to make available to Bonneville any portion of Tacoma's Scheduling Share which is unused in any hour, and Bonneville shall not schedule over Tacoma's Scheduling Share without Tacoma's prior consent.

(B) Tacoma hereby waives any and all rights of access to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor; provided, however, that Bonneville may, at its option, provide Tacoma with access to Bonneville's PNW-PSW Intertie pursuant to any provision of the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(C) Tacoma shall provide Bonneville with the information set forth in sections 3(b)(2)(C)(i) through 3(b)(2)(C)(iii) when Tacoma uses its Scheduling Share to export from the Pacific Northwest energy or power received from third parties. Such exports of energy or power on a real-time basis or for durations of less than four months are excluded from this obligation. For exports of four months or longer duration made on behalf of third parties pursuant to paragraph 3(b)(2), such information shall include:

- (i) the name and business address of the third party;
- (ii) the amount of power or energy and the duration of the transaction; and
- (iii) the name of the recipient or purchaser of such power.

Any additional information needed by Bonneville will be obtained from such third party.



#### 4. SCHEDULING

- (a) Tacoma (and only Tacoma) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Tacoma's Scheduling Share for such hour. The MW amount of Tacoma's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Tacoma's north-to-south schedules and south-to-north schedules (net schedules) for such hour.
- (b) Tacoma shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1) and 4(b)(2). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours referenced in paragraphs 4(b)(1) and 4(b)(2) are Pacific Time.

##### (1) Preschedules

- (A) Bonneville shall make available to Tacoma on each Working Day as soon as practicable after 0800 hours information regarding the PNW AC Intertie Operational Transfer Capability with respect to Preschedules. In the event an emergency or uncontrollable force causes a change in the PNW AC Intertie Operational Transfer Capability, Bonneville shall notify Tacoma of such change as soon as practicable.
- (B) If Long-Term Intertie Access Policy Condition 1 Formula Allocation Procedures or their successor (Condition 1) are expected by Bonneville to become effective, Bonneville shall so notify Tacoma no later than 0930 hours on the Working Day prior to the day on which Condition 1 is expected to become effective. Bonneville shall notify Tacoma no later than 0930 hours

on the Working Day prior to the day on which Condition 1 ceases to be in effect.

- (C) Tacoma shall submit its Preschedule to the Joint Intertie Scheduling Office no later than 1000 hours on each Working Day if Condition 1 is in effect. If Condition 1 is not in effect, Tacoma shall submit its Preschedule to the JISO no later than 1430 hours on each Working Day.

(2) **Real-time Scheduling**

- (A) Real-time Schedules shall be arranged through Bonneville's real-time scheduling office. Bonneville's real-time Scheduler shall make reasonable efforts to receive Real-time Schedules; provided, however, that Bonneville's real-time Scheduler may, but is not required to, accept Real-time Schedules between 1500 and 2200 hours on the Working Day preceding the day for which such Real-time Schedule is submitted.
- (B) Real-time Schedules shall be arranged for a full hour. Arrangements shall be completed no later than 30 minutes prior to that hour.
- (C) Tacoma shall use best efforts to keep schedule changes to a minimum; provided, however, that for purposes of this subparagraph 4(b)(2)(C), "best efforts" shall not be deemed to refer to efforts made regardless of their economic effect.
- (D) The requirements set forth in subparagraphs 4(b)(2)(B) and 4(b)(2)(C) do not preclude schedule changes at other times as may be deemed necessary by any control area operators or other entities involved in effectuating such schedule changes. Such control area operators and

other entities shall be notified by Bonneville of such schedule changes as soon as practicable in accordance with Prudent Utility Practice for purposes of coordinating ramps and proper accounting. Such schedule changes shall be deemed to occur at mid-ramp. The mid-ramp time and the integrated value for the hour shall be subject to the mutual agreement by such control area operators and other entities.

- (E) Subject to compliance with subparagraphs 4(b)(2)(A) through 4(b)(2)(D) and with other applicable PNW AC Intertie scheduling practices then in effect, Bonneville shall make Tacoma's schedule change.
- (c) Bonneville shall make deliveries of power or energy to the California-Oregon border or the John Day Substation, as appropriate, pursuant to schedules submitted in accordance with this section 4; provided, however, that Bonneville shall not be required to make such deliveries in an hour to the extent that Tacoma's schedule exceeds Tacoma's Scheduling Share for such hour, except as may be expressly provided pursuant to subparagraph 3(b)(1)(C).

## 5. **UPGRADES**

- (a) Bonneville shall consult with the Committee one time each year regarding any plans for Upgrades.
- (b) Prior to the completion of an Upgrade, Bonneville shall provide to Tacoma information in writing regarding estimated costs and the MW amount of such Upgrade, to the extent that such information is available to Bonneville.
- (c) As soon as practicable following the completion of an Upgrade, Bonneville shall notify Tacoma in writing of the following: (1) the MW amount of such Upgrade; (2) the capital and related costs (less any amount of such costs collected by Bonneville through rates or charges

other than pursuant to the CO-94 rate in Exhibit A), if any, to Bonneville for completing or implementing such Upgrade; and (3) calculations of (A) Tacoma's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade and (B) Tacoma's Capacity Ownership Percentage multiplied by the capital and related costs, if any, to Bonneville for completing or implementing such Upgrade. Tacoma may elect to acquire a share of such Upgrade in an amount up to Tacoma's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade. Within 100 days from receipt of such written notice from Bonneville, Tacoma shall notify Bonneville in writing of Tacoma's decision regarding such acquisition. If Tacoma elects to acquire, pursuant to this subsection 5(c), a portion of such Upgrade, Tacoma's notice to Bonneville shall include the percentage of such Upgrade that Tacoma elects to acquire (Acquisition Percentage). If Tacoma fails to notify Bonneville within such 100-day period, Tacoma shall be deemed to have elected not to acquire any of such Upgrade.

- (d) If Tacoma elects to acquire a portion of an Upgrade pursuant to subsection 5(c), the cost to Tacoma shall be Tacoma's Acquisition Percentage multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such cost collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, incurred by Bonneville for completing or implementing such Upgrade. Tacoma shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (e) If Tacoma's Acquisition Percentage with respect to an Upgrade equals its Capacity Ownership Percentage and the Acquisition Percentage of any other Capacity Owner with respect to such Upgrade is less than its Capacity Ownership Percentage, then the following shall apply:
  - (1) Bonneville shall, in a timely manner, provide written notice simultaneously to Tacoma and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership

Percentage) of the MW amount equal to 100 percent of that portion of an Upgrade offered to, but not acquired by, the Capacity Owners pursuant to subsection 5(c) (Unacquired Share). If Tacoma and each of such other Capacity Owners have agreed in writing to an apportionment as among themselves of the Unacquired Share (Apportionment), Tacoma may, within 45 days following receipt of such written notice from Bonneville, by written notice request Bonneville to offer in writing to Tacoma such portion of the Unacquired Share as has been apportioned to Tacoma pursuant to the Apportionment, and Bonneville shall offer to Tacoma such portion of the Unacquired Share.

- (2) If Bonneville does not receive from Tacoma and from each Capacity Owner referred to in paragraph 5(e)(1) the requests for offer pursuant to paragraph 5(e)(1) within the 45-day period specified in such paragraph, Bonneville shall, in a timely manner, offer in writing simultaneously to Tacoma and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage), respectively, a portion of an Upgrade offered to, but not acquired by, the other Capacity Owners pursuant to paragraph 5(e)(1) (Second Unacquired Share) up to the "Additional Share Offered" determined as follows:

$$\text{Additional Share Offered} = (A + B) \times C$$

where: A = Tacoma's Capacity Ownership Percentage.

B = Percentage equal to the sum of Capacity Ownership Percentages of Capacity Owners that acquired respectively an Acquisition Percentage equal to their Capacity Ownership Percentage.

C = Second Unacquired Share.

- (3) Within 30 days following Tacoma's receipt of Bonneville's written offer pursuant to paragraph 5(e)(2), Tacoma shall

notify Bonneville in writing of Tacoma's decision regarding acquisition of the Additional Share Offered. If Tacoma fails to notify Bonneville within such 30-day period, Tacoma shall be deemed to have elected not to acquire any of the Additional Share Offered. If Tacoma elects pursuant to this paragraph 5(e)(3) to acquire any or all of the Additional Share Offered, then:

- (A) Tacoma shall include in its notice to Bonneville pursuant to this paragraph 5(e)(3) such share (Additional Share Acquired) of the Additional Share Offered as Tacoma elects to acquire pursuant to this paragraph 5(e)(3), and
  - (B) the cost to Tacoma with respect to such acquisition shall be equal to the proportion of the Additional Share Acquired to such Upgrade multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such costs collected by Bonneville through charges other than payments by Tacoma pursuant to subsection 5(d) or subparagraph 5(e)(3)(B)), if any, to Bonneville for completing or implementing such Upgrade. Tacoma shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (f) All capacity offered but not acquired pursuant to subsections 5(c) and (e) shall for purposes of this Agreement remain with Bonneville.
- (g) After Tacoma has either accepted or declined all offers of capacity by Bonneville pursuant to subsections 5(c) and (e), Tacoma's Capacity Ownership Share, Capacity Ownership Percentage, and Scheduling Percentage in Exhibit C shall be revised to reflect changes resulting from Tacoma's elections pursuant to subsections 5(c) and (e). Revision of Exhibit C shall be pursuant to subsection 19(d). Exhibit G shall be revised accordingly pursuant to subsection 19(i).

6. **SALE OR ASSIGNMENT**

- (a) This Agreement or any interest herein shall not be transferred, sold, alienated, or assigned by Tacoma to any person without Bonneville's prior and express written consent. Such consent shall not be unreasonably withheld. In determining whether to grant its consent under this subsection 6(a), Bonneville shall take into consideration information including, but not limited to, whether the person or entity to whom this Agreement or any interest therein is proposed to be transferred, sold, alienated, or assigned is a person or entity entitled to request and receive transmission services pursuant to section 211 of the Federal Power Act, whether such person or entity can either provide its own scheduling services or has contracted with another entity to provide such scheduling services, whether such person or entity has the financial capability to meet the payment obligations under this Agreement, and whether the person or entity is either electrically interconnected to Bonneville's transmission system or has contractual arrangements for wheeling with others who are electrically interconnected to Bonneville's transmission system. This Agreement shall inure to the benefit of and be binding upon the Parties, their respective legal representatives, permitted assigns, and successors in interest. Any transfer, sale, alienation, or assignment made by Tacoma in violation of this section 6 shall be void ab initio and without any force or effect whatsoever.
- (b) Bonneville hereby consents to the transfer, sale, alienation, or assignment by Tacoma to any other Capacity Owner of all or part of its Capacity Ownership Share and all of Tacoma's rights and obligations pursuant to this Agreement with respect thereto. Bonneville hereby further consents to the transfer, sale, alienation, or assignment by Tacoma of the entire Agreement and of all of Tacoma's rights and obligations under this Agreement to a Scheduling Utility.
- (c) Bonneville hereby consents to the assignment by Tacoma of this Agreement or of any of Tacoma's rights under this Agreement as

security for any indebtedness, whether present or future, of Tacoma pursuant to any mortgage, trust, security agreement or similar instrument of indebtedness (each such instrument, a Debt Instrument) made by and between Tacoma and any mortgagee, trustee, secured party or holder of such instrument of indebtedness, respectively; provided, however, that if Tacoma has defaulted in the performance of its obligations under any Debt Instrument, such that the mortgagee, trustee, secured party or holder of such Debt Instrument, as the case may be, would be entitled at that time to accelerate the amount of indebtedness under such Debt Instrument, Tacoma shall give Bonneville prompt written notice in reasonable detail of such default and shall, at Bonneville's election, enter into good faith discussions with Bonneville regarding the cure of such default.

- (d) If Tacoma transfers, sells, alienates, or assigns, with Bonneville's consent, all or any portion of this Agreement and any rights and obligations pursuant to this Agreement to any person or party, Tacoma shall give Bonneville written notice of such transfer, sale, alienation, or assignment within 10 days after the execution and delivery of the agreement effectuating such transaction by all parties to such transaction.

## **7. OPERATION, MAINTENANCE, AND MANAGEMENT**

- (a) Pursuant to the terms and conditions of the Northwest Intertie Agreements, Bonneville is the operator of the PNW AC Intertie. As such, Bonneville is responsible for the dispatch of the PNW AC Intertie in accordance with Prudent Utility Practice. Bonneville's duties as operator of the PNW AC Intertie shall include, but are not limited to, consistent with Prudent Utility Practice and Northwest Intertie Agreements: (1) determining the PNW AC Intertie Operational Transfer Capability; (2) implementing and assisting in rectifying emergency outages on the PNW AC Intertie due to system emergencies or uncontrollable forces; (3) implementing maintenance outages; and (4) giving and receiving switching orders on the PNW AC



Intertie. In making any determination or in taking any other action referred to in the immediately preceding sentence, Bonneville shall give fair consideration to Tacoma's interests to the extent such interests have been expressed to Bonneville in writing. Bonneville shall operate, maintain, and manage Bonneville's PNW AC Intertie, and study, plan, and implement Upgrades, consistent with Prudent Utility Practice.

- (b) Bonneville shall determine and revise as necessary the PNW AC Intertie Rated Transfer Capability consistent with Prudent Utility Practice and engineering studies based on then existing reliability criteria developed by the North American Electric Reliability Council, the Western Systems Coordinating Council, the Northwest Power Pool, and Bonneville. In the event the PNW AC Intertie Rated Transfer Capability is changed, Bonneville shall promptly notify Tacoma in writing of such change and the new PNW AC Intertie Rated Transfer Capability. If and to the extent that the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability change substantially, Bonneville shall notify Tacoma in writing of such change.
- (c) If at any time during the Term, Bonneville's PNW AC Intertie Rated Transfer Capability becomes less than 3450 MW, or if at any time during the Term there is an imminent likelihood that Bonneville's PNW AC Intertie Rated Transfer Capability would become less than 3450 MW, then Bonneville shall reinforce the Federal Columbia River Transmission System so as to raise Bonneville's PNW AC Intertie Rated Transfer Capability to 3450 MW or otherwise to prevent Bonneville's PNW AC Intertie Rated Transfer Capability from becoming less than 3450 MW. Tacoma's Capacity Ownership Share shall not be decreased on account of any failure by Bonneville to reinforce the Federal Columbia River Transmission System pursuant to this subsection 7(c).
- (d) In the event that Bonneville implements a Reinforcement pursuant to subsection 7(c), Bonneville shall equitably allocate the Reinforcement

Cost for such Reinforcement between Bonneville and Tacoma based on factors including, but not limited to, load responsibility, contractual obligation and generation integration responsibility. Any equitable allocation or agreed to allocation (pursuant to the immediately succeeding sentence) of a Reinforcement Cost pursuant to this subsection 7(d) shall be reflected as a Reinforcement Cost in an Operating Plan proposed by Bonneville pursuant to section 13. To the extent that Bonneville and Tacoma have agreed in writing to an allocation of a Reinforcement Cost incurred by Bonneville pursuant to an agreement or modification referred to in subsection 8(b), the Reinforcement Cost so allocated shall not be subject to arbitration pursuant to section 14 or section 15. Any Reinforcement Cost not allocated to Tacoma pursuant to this subsection 7(d) shall not be payable by Tacoma pursuant to this Agreement.

- (e) Bonneville shall provide Tacoma notice of maintenance outages in accordance with the accepted standards for notice on the PNW AC Intertie. Such notice shall include an evaluation of the impact on Tacoma's Scheduling Share. In scheduling or planning maintenance on PNW AC Intertie, Bonneville shall give fair consideration to Tacoma's interests to the extent such interests have been expressed to Bonneville in writing.

## 8. **EXISTING AGREEMENTS**

- (a) Bonneville shall use good faith efforts to maintain in effect the Interconnection Agreement or its successor.
- (b) Bonneville shall use its best efforts to maintain Tacoma's rights under this Agreement (i) by making no modification to the Northwest Intertie Agreements, (ii) by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie, and (iii) by making no modification to the agreements referred to in the immediately preceding clause (ii) that would have a substantial negative impact on Tacoma's rights pursuant to sections 3, 4, 7, or to subsection 9(b), 9(c),

or 11(a) without Tacoma's prior written consent. Without limiting, modifying, or otherwise affecting any of its rights pursuant to sections 9, 13, 14, 15, and 16, Tacoma hereby consents to Bonneville's modification of the Northwest Intertie Agreements or Bonneville's entering into other agreements or modification to such Agreements with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification or such agreement is made or entered into by Bonneville for the purpose of performing Bonneville's obligations pursuant to subsection 7(c).

## **9. PAYMENT PROVISIONS**

As full compensation for their respective payment obligations under this Agreement, Tacoma shall make payments to Bonneville in accordance with the provisions of this section 9, and Bonneville shall make payments and refunds to Tacoma in accordance with the provisions of this section 9.

### **(a) Lump Sum Payment**

- (1) As soon as practicable after the Effective Date, Bonneville shall render a bill to Tacoma for the Initial Lump Sum Payment (less the negotiation deposit, if any, with applicable interest as described in section C of Exhibit D) and such bill shall include as an attachment and as part of such bill a completed section C of Exhibit D, setting forth the calculation of such Initial Lump Sum Payment due Bonneville in accordance with section IV.A of the CO-94 rate set forth in Exhibit A. Tacoma shall make such payment pursuant to the CO-94 rate and the applicable GTRSPs set forth in Exhibit A. Each of Bonneville and Tacoma agrees that section C of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

(2) **Calculation and Billing of the Adjusted Capacity  
Ownership Price**

- (A) Approximately December 1995, or as soon as practicable thereafter, Bonneville shall, in accordance with section IV.B of the CO-94 rate set forth in Exhibit A, calculate the Adjusted Capacity Ownership Price to reflect actual construction costs of the facilities listed in section A of Exhibit D and the actual AFUDC with respect to such facilities. Such calculation shall be made in accordance with column 2, section B of Exhibit D.
- (B) Promptly after Bonneville has calculated the Adjusted Capacity Ownership Price pursuant to subparagraph 9(a)(2)(A), Bonneville shall render a bill or refund voucher to Tacoma, and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2), section B of Exhibit D (with a completed column 2), and a completed section D of Exhibit D reflecting the Adjusted Lump Sum Payment. If the Adjusted Lump Sum Payment is greater than the Initial Lump Sum Payment, Tacoma shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in such bill, which amount shall be equal to the amount set forth on line 7, section D of Exhibit D (such amount including interest as set forth on line 6, section D of Exhibit D). If the Adjusted Lump Sum Payment is less than the Initial Lump Sum Payment, Bonneville shall pay to Tacoma, within 30 days after the date of such refund voucher, the amount set forth in such refund voucher, which amount shall be equal to the amount set forth on line 7, section D, of Exhibit D (such amount including interest as set forth on line 6, section D, of Exhibit D). Each of

Bonneville and Tacoma agrees that sections A, B, and D of Exhibit D are consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(3) Calculation and Billing of the Revised Adjusted Capacity Ownership Price**

- (A) After payment is made by Tacoma pursuant to subparagraph 9(a)(2)(B), or a refund is made by Bonneville to Tacoma pursuant to subparagraph 9(a)(2)(B), Bonneville may, in accordance with the CO-94 rate set forth in Exhibit A, make one or more adjustments to the Adjusted Capacity Ownership Price; provided, that any such adjustment shall be made by Bonneville within 30 days after the date on which
- (i) Bonneville receives, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp or any other entity performing work for Bonneville on the Third AC Intertie Project, payment from Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, or
  - (ii) Bonneville pays, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, any amount to Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project; and
- provided, further, that no adjustment of the Adjusted Capacity Ownership Price or of any Revised Adjusted Capacity Ownership Price shall be made by Bonneville after December 31, 2005.

(B) Promptly after Bonneville has calculated a Revised Adjusted Capacity Ownership Price, Bonneville shall render to Tacoma a bill or refund voucher with respect to such Revised Adjusted Capacity Ownership Price and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), section B of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), and a completed section E of Exhibit D reflecting the current Revised Adjusted Capacity Ownership Price and the current Revised Adjusted Lump Sum Payment. If the current Revised Adjusted Lump Sum Payment with respect to such Revised Adjusted Capacity Ownership Price is greater than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, then Tacoma shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in the bill referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E, of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E, of Exhibit D). If the current Revised Adjusted Lump Sum Payment is less than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, Bonneville shall pay to Tacoma, within 30 days after the date of such refund voucher, the amount set forth in the refund voucher referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E of Exhibit D with respect to

the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E of Exhibit D). Each of Bonneville and Tacoma agrees that section E of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

- (4) For purposes of implementing the CO-94 rate, the following shall apply:
- (A) the calculations pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the adjustment "to reflect the difference between the actual and the estimated Capacity Ownership Price" required under section IV.B of the CO-94 rate;
  - (B) the calculations of interest pursuant to footnote 2 of section D of Exhibit D and footnote 2 of section E of Exhibit D shall be deemed to be the computation of "interest using the weighted average interest rate on Bonneville's outstanding bonds" required pursuant to section IV.B of the CO-94 rate;
  - (C) the calculations of the Adjusted Capacity Ownership Price and of the Revised Adjusted Capacity Ownership Price pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the determination of the "actual Capacity Ownership Price" required pursuant to section IV.B of the CO-94 rate;
  - (D) as used in the CO-94 rate, the terms "Bonneville's PNW AC Intertie," "PNW AC Intertie," "Third AC Intertie," "Third AC Intertie Project," and "Third AC Intertie System Reinforcement" shall be deemed to have the respective meanings of such terms set forth in section 1;

- (E) as used in the CO-94 rate, the term "Capacity Ownership Share" shall be deemed to mean "Capacity Ownership Percentage" as defined in section 1;
- (F) the indirect costs and overhead costs described in footnote 5 of section B of Exhibit D shall be deemed to be the indirect costs and overhead costs referred to in section III.A of the CO-94 rate; and
- (G) the last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

- (5) For purposes of application of the CO-94 rate set forth in Exhibit A, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (A) section I;
  - (B) section III.A;
  - (C) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;



- (D) subsection 4 of section IV.A;
- (E) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A; and
- (F) for purposes of subsection 16(e) of this Agreement and as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

(b) **Annual Charges**

(1) **Payments Pursuant to AC-93 Rate**

- (A) From and after the first Working Day after Bonneville receives payment from Tacoma pursuant to paragraph 9(a)(1), Bonneville shall bill Tacoma on the monthly power bill in accordance with the AC-93 rate set forth in Exhibit A. Tacoma shall pay such bill in accordance with the applicable GTRSPs set forth in Exhibit A.
- (B) For purposes of application of the AC-93 rate, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (i) section I;
  - (ii) section III.A;
  - (iii) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;

- (iv) the first sentence of subsection 3 of section IV.A;
- (v) subsection 4 of section IV.A;
- (vi) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A;
- (vii) the first paragraph of subsection 6 of section IV.A; and
- (viii) as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

(C) The last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

(D) Bonneville hereby agrees that the provisions of the AC-93 rate shall have no application or effect with respect to the following:

- (i) any replacement of the series capacitor banks containing polychlorinated biphenyl at the Sand Springs, Sycan and Fort Rock Substations; and

(ii) any replacement commenced prior to the Effective Date or not completed prior to September 30, 1995.

(E) Upon and after the effective date of the annual costs rate set forth in Exhibit B, Bonneville shall cease billing Tacoma pursuant to the AC-93 rate.

(2) **Payments Pursuant to Annual Costs Rate**

From and after the date the annual costs rate set forth in Exhibit B becomes effective, the following shall apply:

(A) **Operations Costs, Maintenance Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs**

- (i) During each fiscal year during the Term, Bonneville shall bill Tacoma on the monthly power bill, and Tacoma shall pay, pursuant to Exhibit B, forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for such fiscal year. Such costs shall be, respectively, the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the fiscal year in which such month occurs.
- (ii) Within eight months after the end of each fiscal year during the Term (such fiscal year being

hereinafter referred to as a "Fiscal Year"), Bonneville shall determine and calculate, pursuant to Exhibit I, Schedules A, B, D, E, F, G, and H, actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year most recently ended.

- (iii) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year is greater than the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year, Bonneville shall refund to Tacoma the difference between such forecast costs and such actual costs as a lump sum payment, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Bonneville shall, promptly following the date on which the calculation of such difference is made, provide Tacoma written notice of such refund. Within the 30-day period referred to in the first sentence of this section 9(b)(2)(A)(iii), Bonneville shall provide to Tacoma an Operating Plan amended in accordance with subsection 13(k) containing revised schedules in the format set forth in

Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (iv) If, based on the calculation performed pursuant to subparagraph 9(b)(2)(A)(ii), the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is equal to or less than 105 percent, but greater than 100 percent, of the sum of the forecast Operations costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs in the Operating Plan for the Fiscal Year, Bonneville shall bill to Tacoma on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Tacoma shall pay such bill in accordance with the Billing Provisions. Within the 30-day period referred to in the immediately preceding sentence, Bonneville shall provide to Tacoma an amended Operating Plan containing revised schedules in the format set forth in Exhibit I, Schedules A, B,

D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (v) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the actual Operations Cost, actual Maintenance Cost, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is greater than 105 percent of the sum of the forecast Operations Cost, forecast Maintenance Cost, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year, Bonneville shall bill to Tacoma on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Tacoma shall pay such bill in accordance with the Billing Provisions; provided, however, that Bonneville shall not bill Tacoma pursuant to this section 9(b)(2)(A)(v) any amount which exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and

Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year unless and until such amount which exceeds 100 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year has been included in an Operating Plan amended pursuant to subsection 13(k).

- (vi) Simple interest shall be accrued on payments or refunds due pursuant to this paragraph 9(b)(2) with respect to any fiscal year during the Term using the weighted average interest rate on Bonneville's outstanding bonds or other debt instruments then used by Bonneville and such interest shall accrue from (and including) the date of the last day of such fiscal year to (but excluding) the date of refund to Tacoma or to (but excluding) the due date of a payment due Bonneville.

**(B) Replacement Cost and Reinforcement Cost**

Bonneville shall bill Tacoma on the monthly power bill Replacement Costs for any Replacement and Reinforcement Costs for any Reinforcement. Bonneville shall render such bill within 15 months following the date on which the project work order for such Replacement or such Reinforcement, as the case may be, is closed. Tacoma shall pay such bill pursuant to Exhibit B and sections 9(b)(2)(B)(i), 9(b)(2)(B)(ii), 9(b)(2)(B)(iii) and 9(b)(2)(B)(iv).

- (i) If the forecast Replacement Cost for a Replacement is greater than the actual Replacement Cost for such Replacement or if the forecast Reinforcement Cost for a Reinforcement is greater than the actual Reinforcement Cost for such Reinforcement, Bonneville shall bill Tacoma the actual Replacement Cost for such Replacement or the actual Reinforcement Cost for such Reinforcement, as the case may be. Bonneville shall provide to Tacoma an Operating Plan amended in accordance with subsection 13(k) containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement, as the case may be.
- (ii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is equal to or less than 105 percent, but greater than 100 percent, of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Tacoma such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Tacoma shall pay such bill pursuant to subparagraph 9(b)(2)(B). Bonneville shall provide to Tacoma an amended Operating Plan containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the difference between the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement.



- (iii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is greater than 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Tacoma such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Tacoma shall pay such bill pursuant to subparagraph 9(b)(2)(B); provided, however, that Bonneville shall not bill Tacoma pursuant to this subparagraph 9(b)(2)(B) any amount which exceeds 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, as the case may be, unless and until such amount which exceeds 100 percent of such forecast Replacement or such forecast Reinforcement Cost, as the case may be, has been included in an amended Operating Plan pursuant to subsection 13(k).
- (iv) Charges pursuant to sections 9(b)(2)(B)(i), (ii) and (iii) for Replacement Costs and Reinforcement Costs shall accrue simple interest pursuant to section III.D of Exhibit I.

(c) **Upgrade Charges**

For purposes of implementing the CO-94 rate, the following shall apply:

- (1) as used in the CO-94 rate, the term "upgrade" shall be deemed to mean "Upgrade" as defined in section 1, the term "rated transfer capability" shall be deemed to mean "PNW AC Intertie Rated Transfer Capability" as defined in section 1 and the term

"AFUDC" shall be deemed to have the meaning set forth for such term in section 1;

- (2) the "Capacity Ownership Share of the capital and related cost of the upgrade," referred to in section III.B of the CO-94 rate shall be deemed to be the costs pursuant to subsection 5(d) and subparagraph 5(e)(3)(B), as applicable; and
- (3) "construction costs (including direct, indirect and overhead costs) and AFUDC" referred to in section III.B of the CO-94 rate and "related costs" referred to in section III.B of the CO-94 rate together shall be deemed to be Upgrade costs and shall be determined in the same manner in which Replacement Costs are determined pursuant to section III of Exhibit I; provided, however, that expenses that are properly allocable to an Upgrade (i.e., "related costs" referred to in section III.B of the CO-94 rate) in accordance with generally accepted accounting principles (as defined in Exhibit I) may be included by Bonneville in Upgrade costs for such Upgrade.

(d) **Payments of Charges Pursuant to Section 3(b)(1)(C)(i)**

Bonneville shall bill Tacoma for wheeling provided pursuant to section 3(b)(1)(C)(i) on Tacoma's monthly power bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A and Tacoma shall pay such bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A; provided, however, that under any successor to the IS-93 rate, Tacoma shall not be obligated to pay any rate or charge greater than the rate or charge payable by any other party to which Bonneville provides nonfirm wheeling services on Bonneville's PNW AC Intertie for such party's nonfirm transaction of a duration similar to Tacoma's wheeling transaction pursuant to section 3(b)(1)(C)(i).

(e) **Suspension for Failure to Perform**

- (1) If at any time during the term of this Agreement Bonneville does not receive payment due and owing to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d), Bonneville shall be entitled to suspend performance of its obligations to Tacoma pursuant to section 4 without incurring any liability to Tacoma therefor; provided, that Bonneville shall not be entitled to suspend performance pursuant to this paragraph 9(e)(1) earlier than five Working Days following receipt from Bonneville by Tacoma of written notice of such suspension. Such suspension shall continue in effect until the next Working Day following the Working Day on which Tacoma makes payment in full to Bonneville of the balance owed to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d). During the period of such suspension, Tacoma shall not be entitled to participate through the Committee in any review of an Operating Plan commenced by the Committee pursuant to section 13 during such period of suspension, or to participate in any arbitration commenced by the Committee pursuant to sections 14 and 15 during such period of suspension, or to participate in any audit commenced by the Committee pursuant to section 16 during such period of suspension.
  
- (2) If during any period in any month Bonneville fails to make deliveries in accordance with subsection 4(c), Tacoma shall be entitled, without incurring any liability to Bonneville therefor, to delay any payment due and owing to Bonneville by Tacoma pursuant to subsection 9(b) or 9(d) for a period, equal to the period during which Bonneville failed to make such deliveries, commencing on the date the monthly power bill for such month would otherwise be payable by Tacoma pursuant to this Agreement; provided, however that Tacoma's entitlement pursuant to this paragraph 9(e)(2) shall apply only with respect

to the amount of such monthly power bill to be paid directly to Bonneville or its agent.

**(f) Payments or Refunds by Bonneville**

- (1) Bonneville shall make any payment to Tacoma pursuant to subparagraph 3(b)(1)(B) within 30 days following the end of the month in which such payment becomes due to Tacoma pursuant to subparagraph 3(b)(1)(B).
- (2) Bonneville shall pay to Tacoma, in a lump sum, any refund due to Tacoma pursuant to subsection 16(e) or paragraph 16(f)(2) within 30 days following the date on which such refund becomes due to Tacoma pursuant to subsection 16(e) or paragraph 16(f)(2), respectively.
- (3) Bonneville shall pay any refund, credit, or payment due to Tacoma under section 18 pursuant to the terms and conditions set forth in section 18.
- (4) Each payment, credit or refund due to Tacoma by Bonneville pursuant to this Agreement shall be made by Bonneville, at Bonneville's option, (A) by check payable to the order of Tacoma, (B) by electronic funds transfer of immediately available funds into such account as may be designated in writing by Tacoma from time to time for such purpose or (C) by crediting the amount of such payment, credit or refund on Tacoma's power bill.

**10. TRANSMISSION LOSSES**

- (a) To compensate Bonneville for transmission losses incurred by Bonneville in making deliveries scheduled by Tacoma pursuant to this Agreement, Tacoma shall make available, or arrange to have made available, to Bonneville, at any point mutually acceptable to the Parties at which the respective electric systems of Tacoma and

Bonneville are interconnected, on the corresponding hour 168 hours later or on another hour to be agreed upon, the amounts of electric power equal to Tacoma's net PNW AC Intertie schedule multiplied by the appropriate loss factor specified in Exhibit E. Tacoma's net PNW AC Intertie schedule shall be, for any given hour, the absolute value of the sum of Tacoma's north-to-south schedules (positive) and south-to-north schedules (negative) for such hour.

- (b) Upon the conclusion of any review by Bonneville of the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan provided to the Committee pursuant to section 13. The Committee may make recommendations regarding such results and any revisions to the loss factor in Exhibit E, Part A. Only recommendations regarding assumptions (including, without limitation, data inputs and source of date) made by Bonneville in its review or revision of the loss factor in Exhibit E, Part A, and recommendations regarding the results of such review or revision shall be subject to arbitration pursuant to section 14.
- (c) Tacoma's Scheduling Share shall not be reduced by any amount of losses returned to Bonneville pursuant to subsection 10(a).

## 11. **REMEDIAL ACTIONS**

### (a) **Bonneville's Responsibilities**

- (1) Within five days after the Effective Date, Bonneville shall notify Tacoma in writing of the plan for remedial actions required to maintain the PNW AC Intertie Rated Transfer Capability, which plan shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice. If and to the extent that such plan is amended, modified, or replaced, Bonneville shall, promptly following such amendment, modification, or replacement, provide written

notice to Tacoma of such amendment, modification, or replacement, as the case may be. Bonneville shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, required to maintain the portion of Bonneville's PNW AC Intertie Rated Transfer Capability not purchased by Capacity Owners. Such remedial actions shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice.

- (2) Bonneville shall be responsible for generating appropriate control signals for transmission to Tacoma for purposes of effectuating remedial actions pursuant to this section.

**(b) Tacoma's Responsibilities**

- (1) Tacoma shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other remedial actions required to maintain Tacoma's Capacity Ownership Share. Such remedial actions shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1) and Prudent Utility Practice. Bonneville may perform engineering analyses to confirm Tacoma's providing capability to arm and having available appropriate remedial actions pursuant to this paragraph 11(b)(1).
- (2) In any given hour, Tacoma shall be responsible for providing sufficient remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, to maintain Tacoma's schedule on the PNW AC Intertie for such hour. To the extent that load tripping or generator dropping is required as a remedial action by Tacoma pursuant to this paragraph 11(b)(2) in any given hour, the required amount of such load tripping or such generator dropping shall be

determined by dividing the amount of power scheduled by Tacoma on Tacoma's Scheduling Share in such hour by the total amount of power scheduled on the PNW AC Intertie in such hour and multiplying the result by the total amount of generation or load (in MW) to be armed for the PNW AC Intertie in such hour.

- (3) Tacoma shall provide, design, operate, and maintain the necessary equipment to accept control signals from Bonneville and to transmit such signals to Tacoma's generator dropping, load tripping, or other remedial action sites, and to arm and initiate the appropriate control action(s). Such design, operation, and maintenance shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1), and Prudent Utility Practice.
- (4) Tacoma and Bonneville may mutually agree that Bonneville will, pursuant to terms and conditions mutually acceptable to the Parties, provide the remedial actions required of Tacoma pursuant to subsection 11(b).

## **12. CAPACITY OWNERS' COMMITTEE**

### **(a) Composition of Committee**

Tacoma may appoint one representative (and an alternate who may act in the absence of such representative) as a member of the Capacity Owners' Committee (Committee). If during any period Tacoma fails to appoint a representative to the Committee, Tacoma waives any and all rights during such period that would otherwise have accrued to it, individually or as a member of the Committee, pursuant to sections 12, 13, 14, 15, and 16 of this Agreement. Tacoma hereby appoints as its representative pursuant to this subsection the following representative and alternate to the Committee:

Representative: Light Division Superintendent

Alternate: Power Manager

**(b) Convening Meetings**

- (1) Any Capacity Owner that has appointed a representative to the Committee may convene a meeting of the Committee pursuant to the procedures set forth in subsection 12(e). The Capacity Owner convening a Committee meeting shall be responsible for preparing any necessary notices, identifying the subject matter and issues to be discussed, and transmitting notices and relevant documents to the other Committee members and, if appropriate, to Bonneville.
- (2) At the written request of any Capacity Owner that has appointed a representative to the Committee, Bonneville shall attend Committee meetings.
- (3) The Committee may conduct business only at a properly convened meeting at which a quorum, as defined in subsection 12(c), is present. The Committee shall make or convey any request, designation, recommendation, notice, appointment, submission, audit report or exception, or statement to which Bonneville is required to respond or which creates or triggers an obligation of Bonneville, pursuant to this Agreement, only upon a decision of the Committee made at a properly convened meeting at which a quorum is present.
- (4) Each fiscal year, Bonneville shall convene an annual meeting of the Committee. The purpose of such annual meeting shall be to discuss the Operating Plan delivered, pursuant to subsection 13(b), to each Capacity Owner that has appointed a representative to the Committee. Bonneville shall convene such annual meeting no earlier than 15 days, but no later than 30 days, following the date of such delivery of the Operating Plan.



- (5) In addition to the meeting referred to in paragraph 12(b)(4), Bonneville may, at its discretion, convene meetings of the Committee, pursuant to the procedures set forth in subsection 12(e), to present to the Committee any information Bonneville deems relevant.

(c) **Meeting Quorum**

The respective representatives of all of the Capacity Owners that have appointed a representative to the Committee, less one, shall constitute a quorum.

(d) **Meetings by Telephone Conference**

Committee meetings pursuant to the Capacity Ownership Agreements may be conducted by telephone provided all Capacity Owners and, if appropriate, Bonneville, are notified pursuant to the procedures set forth in subsection 12(e) of any such meeting.

(e) **Meeting Notices**

- (1) All Committee meeting notices pursuant to the Capacity Ownership Agreements shall be provided in writing no less than 14 days prior to such meeting.
- (2) Any Committee meeting notice required by this section shall be deemed properly made if delivered in person, by electronic facsimile, or by mail or other qualified delivery service, postage prepaid, to the person specified below:

If to Bonneville:

Group Vice President for Marketing, Conservation and  
Production

Bonneville Power Administration

905 NE 11th Avenue

Portland, OR 97232

Telephone (503) 230-5152

Facsimile (503) 230-5207

If to Puget:

Vice President Power Planning

Puget Sound Power & Light Company

411 108th Avenue NE 15th Floor

Bellevue, WA 98004-5515

Telephone (206) 462-3137

Facsimile (206) 462-3175

If to Seattle:

Director, Power Management Division

Seattle City Light

1111 Third Avenue, Room 420

Seattle, WA 98101

Telephone (206) 386-4530

Facsimile (206) 386-4955

If to PNGC:

Director of Power Management

Pacific Northwest Generating Cooperative

711 NE Halsey Street, Suite 200

Portland, OR 97232

Telephone (503) 288-1234

Facsimile (503) 288-2334

If to Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201  
Telephone (206) 258-8211  
Facsimile (206) 258-8305

If to Tacoma:

Power Manager  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411  
Telephone (206) 502-8294  
Facsimile (206) 502-8628

Attendance at a meeting by a representative of a Capacity Owner constitutes waiver by such Capacity Owner of notice of such meeting.

- (3) Either Party may, by written notice to the other Party and to the Capacity Owners other than Tacoma, change the designation, address, or facsimile number of the person so specified by it in subsection 12(a) or paragraph 12(e)(2).

**13. OPERATING PLAN AND AMENDMENTS TO THE OPERATING PLAN**

- (a) The provisions of this section shall become effective commencing August 1, 1995; provided, however, that unless and until the annual costs rate set forth in Exhibit B is approved by FERC on an interim basis, Bonneville shall not have any right pursuant to this Agreement to bill or charge to Tacoma, and Tacoma shall not have any obligation

pursuant to this Agreement to pay to Bonneville, any amount pursuant to any Operating Plan.

**(b) Delivery of Operating Plan**

- (1) On or before August 1, 1995, Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1996 and an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1997.
- (2) Not later than one year preceding the first day of each fiscal year, other than the fiscal years specified in paragraph 13(b)(1), Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for such fiscal year.

(c) Each Operating Plan delivered pursuant to subsection 13(b) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast costs for the fiscal year to which such Operating Plan pertains, and such Operating Plan may contain such other information as Bonneville may deem relevant; and each amendment of an Operating Plan delivered pursuant to subsection 13(k) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast or actual costs, as appropriate, for the fiscal year to which such Operating Plan pertains, and such amendment may contain such other information as Bonneville may deem relevant:

- (1) a forecast of, or the actual, Allocated Direct Cost of Operations Cost (pursuant to section I.C of Exhibit I), Indirect Cost of Operations Cost (pursuant to section I.D of Exhibit I), and Overhead Cost of Operations Cost (pursuant to section I.E of Exhibit I) in the format set forth in Exhibit I, Schedule A;

- (2) a forecast of, or the actual, Direct Cost of Maintenance Cost (pursuant to section II.B of Exhibit I), Indirect Cost of Maintenance Cost (pursuant to section II.D of Exhibit I), and Overhead Cost of Maintenance Cost (pursuant to section II.E of Exhibit I) in the format set forth in Exhibit I, Schedule B;
  
- (3) a forecast of, or the actual, Direct Cost of Replacements and Reinforcements (pursuant to section III.A of Exhibit I), Indirect Cost and Overhead Cost of Replacements and Reinforcements (pursuant to section III.B of Exhibit I), and AFUDC of Replacements and Reinforcements (pursuant to section III.C of Exhibit I) in the format set forth in Exhibit I, Schedule C, for each Reinforcement and Replacement which is expected to be, in the fiscal year to which the Operating Plan pertains, a planned new start, construction work in progress on a previously initiated Reinforcement or Replacement, as the case may be, or a closed work order. The forecast shall include for each such Reinforcement or Replacement an estimate of the total cost of construction and the cost to be incurred with respect to such Reinforcement or Replacement during each fiscal year until the work order for such Reinforcement or Replacement has been closed. Bonneville may elect, but shall not be required, to include in any such forecast the information set forth in the immediately preceding sentence regarding any Replacement and Reinforcement which is expected to be planned a new start in any fiscal year following the fiscal year to which the Operating Plan pertains. In the event Bonneville elects to forecast Direct Cost, Indirect Cost, and Overhead Cost of any Reinforcement or Replacement which is expected to be a planned new start in any fiscal year subsequent to the fiscal year to which the Operating Plan pertains, Bonneville shall provide to the Committee such forecast costs, in the format set forth in Exhibit I, Schedule C (together with additional information pertinent to such forecast costs as required by paragraph 13(c)(9)), 30 days prior to the date such Operating Plan is delivered to the Committee pursuant to subsection

13(b). In addition, Bonneville shall include such forecast costs in the Operating Plan delivered to the Committee pursuant to subsection 13(b);

- (4) the General Plant Cost (pursuant to section IV of Exhibit I) in the format set forth in Exhibit I, Schedule D;
- (5) a forecast of, or the actual, Other Costs (pursuant to section V of Exhibit I) in the format set forth in Exhibit I, Schedule E;
- (6) a forecast of, or the actual, Contracts and Rates Costs (pursuant to section VI of Exhibit I) in the format set forth in Exhibit I, Schedule F;
- (7) a forecast of, or the actual, Power Scheduling Costs (pursuant to section VII of Exhibit I) in the format set forth in Exhibit I, Schedule G;
- (8) a forecast of, or the actual, End of Term Costs (pursuant to section VIII of Exhibit I) in the format set forth in Exhibit I, Schedule H. Such forecast shall include Bonneville's proposed apportionment of such End of Term Costs among Tacoma and Capacity Owners other than Tacoma and Bonneville's rationale for such apportionment;
- (9) additional information pertinent to the forecast costs, actual costs, and General Plant Cost provided pursuant to paragraphs 13(c)(1) through 13(c)(8), including, without limitation, descriptions of the activities or projects and explanations of the costs comprising the Direct Cost components of such forecast costs, actual costs, and General Plant Cost, and explanations of MFU counts; and
- (10) if Bonneville has reviewed the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), the Operating Plan shall contain the results of such review, including any revision to the loss

factor in Exhibit E, Part A, pursuant to subsection 10(b), and any additional information pertinent to such review.

**(d) Requests by Committee**

(1) No later than 15 days after the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), the Committee may make a single request of Bonneville in writing for:

(A) such supporting documentation, data, and information as may be reasonably necessary to analyze (i) the Operating Plan, or its constituent parts, delivered to the Committee pursuant to subsection 13(b), or (ii) any amendment to an Operating Plan pursuant to subsection 13(k); and

(B) such documentation, data, and information relating to Bonneville's present or past activities or practices concerning Bonneville's PNW AC Intertie and to alternatives considered by Bonneville to costs or activities described in the Operating Plan or any amendment to an Operating Plan as may be reasonably necessary for the Committee to formulate recommendations pursuant to subsection 13(e);

provided, however, that with regard to requests for documentation, data, and information pursuant to this paragraph 13(d)(1), the Committee must designate in such request the specific item in the Operating Plan or in any amendment to an Operating Plan to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information. Such single request may contain multiple parts.

- (2) The Committee shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to paragraph 13(d)(1).
- (3) Bonneville shall have 20 days from the date it receives any request pursuant to paragraph 13(d)(1) to provide the documentation, data, and information requested; provided, however, that Bonneville shall be under no obligation (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Committee, or (D) to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or any regulation and Executive Order applicable to Bonneville.
- (4) The Committee in such request shall designate one of its members to be its representative for the sole purpose of receiving such documentation, data, or information from Bonneville pursuant to this subsection 13(d). Bonneville shall deliver such documentation, data, or information to the representative designated by the Committee to receive such materials.
- (5) For purposes of this subsection 13(d) and subsection 13(f), each of Bonneville and the Committee shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests for, documentation, data, and information and responses to such requests.



- (e) The Committee shall have 20 days from the date on which it receives documentation, data, or information from Bonneville pursuant to subsection 13(d) or, if none was requested, 50 days from the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), whichever date is later, to recommend to Bonneville in writing a revision or revisions to any forecast cost or General Plant Cost in the Operating Plan. The Committee shall have the time periods set forth in subsection 13(m) to recommend to Bonneville in writing a revision or revisions to a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan. Such recommendation shall set forth, at a minimum, the exact revisions to the forecast cost or General Plant Cost proposed by the Committee and the reasons for such revisions. Failure of the Committee to recommend a revision or revisions to all or any portion of a forecast cost or General Plant Cost in the Operating Plan or a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan within the applicable time limit set forth above shall be deemed to constitute acceptance by the Committee of all portions of the forecast costs and General Plant Cost of the Operating Plan for which the Committee has not recommended a revision.
- (f) No later than 15 days after receipt of a Committee recommendation made pursuant to subsection 13(e), Bonneville may make a single request (which may contain multiple parts) in writing of the Committee for such supporting documentation, data, and information as may be reasonably necessary to analyze the Committee's recommendation, including without limitation, any estimated costs or forecast costs contained in such recommendation; provided, however, that the Capacity Owners that have appointed a representative to the Committee shall be under no obligation (1) to create additional documentation, data, or information, (2) to provide documentation, data, or information that is not readily available to the Committee or to any Capacity Owner that has appointed a member to the Committee, (3) to provide to Bonneville documentation, data, or information that the Committee has previously provided to Bonneville; provided, further, that with regard to requests for

documentation, data, and information pursuant to this subsection 13(f), (1) Bonneville must designate in such request the specific item in the Committee's recommendation to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information, and (2) Bonneville shall use reasonable efforts, consistent with Bonneville's needs as set forth in this subsection 13(f), to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to this subsection. Such single request shall be made of the Committee by delivering a copy of the request to each Capacity Owner that has appointed a representative to the Committee. The Committee shall have 20 days from the date of its receipt of Bonneville's request to provide a single response containing the documentation, data, and information requested.

- (g) If the Committee makes any recommendation in writing pursuant to subsection 13(e), Bonneville shall have the greater of 15 days from the date of receipt of the requested documentation, data, and information requested pursuant to subsection 13(f) or, if none was requested, 30 days from the date of receipt of the Committee's recommendations made pursuant to subsection 13(e) to, by written notice to each Capacity Owner that has appointed a representative to the Committee, accept the recommendation, accept the recommendation in part, reject the recommendation, or propose an action that is responsive to the Committee's recommendation and that is different from Bonneville's proposal contained in the Operating Plan. If Bonneville makes such a proposal, Bonneville shall set forth in such written notice the exact revisions to the Operating Plan. The Committee shall have 7 days from the date of receipt of Bonneville's proposal to make any requests in writing for supporting documentation, data, and information as set forth in subsection 13(d). Bonneville shall have 7 days to respond to those requests as set forth in subsection 13(d). Failure of Bonneville to respond in writing to any recommendation of the Committee within the applicable time period set forth in this subsection 13(g) shall be deemed to constitute rejection of such recommendation.

- (h) If Bonneville rejects all or any portion of the Committee's recommendation, or if the Committee elects not to accept a proposal made by Bonneville pursuant to subsection 13(g), then the Committee may
- (1) elect by written notice to Bonneville to refer to binding arbitration, pursuant to section 14 and consistent with subsections 13(i) and 14(b), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g); and
  - (2) elect by written notice to Bonneville to refer to nonbinding arbitration pursuant to section 15 and consistent with subsections 15(a) and 15(d), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g).

**Failure of the Committee to elect to refer to arbitration**

- (A) such portion of any recommendation of the Committee not accepted by Bonneville within 15 days following Bonneville's rejection or acceptance in part of such recommendation of the Committee pursuant to subsection 13(g), or
- (B) any proposal made by Bonneville pursuant to subsection 13(g) within 15 days following Bonneville's written notice of such proposal or, if documentation, data, or information was requested by the Committee pursuant to subsection 13(g), within 15 days following receipt by the Committee of such documentation, data, or information pursuant to subsection 13(g),

shall be deemed to constitute acceptance by the Committee of Bonneville's rejection or acceptance in part of the recommendation of the Committee or of Bonneville's proposal and waiver by the Committee of any right pursuant to this section 13 or to section 15 to arbitrate such recommendation or portion thereof.

- (i) The Committee may, subject to the immediately succeeding sentence, arbitrate, pursuant to subsection 13(h), any recommendation by the Committee concerning a revision pursuant to this Agreement to a loss factor set forth in any Operating Plan or in any amendment to an Operating Plan or concerning any forecast cost or actual (allocated or otherwise) cost set forth in any Operating Plan or in any amendment to an Operating Plan (including the following costs and related items set forth in any Operating Plan, or in any amendment to an Operating Plan, pursuant to Exhibit I, Schedule A, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; Exhibit I, Schedule B, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; Exhibit I, Schedule C, lines 1, 2, 3, 4 and 5; Exhibit I, Schedule D, lines 3, 4, 5, 6, 7, 8, 9, 10 and 11; Exhibit I, Schedule E, lines 2 and 3; Exhibit I, Schedule F, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; Exhibit I, Schedule G, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; and Exhibit I, Schedule H, lines 1, 2, 3, and 4). The Committee's right pursuant to this subsection 13(i) to arbitrate any such recommendation shall be subject to the following limitations:

- (1) if such recommendation, or portion thereof, includes a Replacement Cost for a Replacement or a Reinforcement Cost for a Reinforcement, and such Replacement Cost or Reinforcement Cost was included in a previous Operating Plan (either of such costs, a Previous Operating Plan Cost), the Committee may arbitrate pursuant to this subsection 13(i) such recommendation, or portion thereof, only to the extent that such recommendation, or portion thereof, includes any Replacement Cost or Reinforcement Cost in excess of the Previous Operating Plan Cost;

- (2) the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, pertaining to a revision to a loss factor pursuant to this Agreement only to the extent such arbitration is permitted by subsection 10(b);
- (3) the Committee may arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning an Other Cost only to the extent that such Other Cost is a cost set forth in an Operating Plan or amendment to an Operating Plan pursuant to Exhibit I, Schedule E, line 2 and such recommendation, or portion thereof pertains to whether such Other Cost is properly allocated to Bonneville's PNW AC Intertie pursuant to Exhibit I, section V;
- (4) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in such Operating Plan or in any amendment to an Operating Plan, the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan only to the extent that such actual cost exceeds 105 percent of the forecast cost for such activity or such project; provided, however, that, without limiting any of Tacoma's rights and benefits pursuant to subsection 16(c), the Committee may not arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan or in any amendment to an Operating Plan if such actual cost is less than 105 percent of the forecast for such activity or such project;

- (5) the Committee may not arbitrate, pursuant to this subsection 13(i), (a) the allocation by Bonneville pursuant to this Agreement of any of its costs to overall overhead costs or to overall indirect costs, or (b) the allocation by Bonneville pursuant to this Agreement of a portion of Bonneville's overall overhead costs and overall indirect costs to its total system operations costs, its total system maintenance costs, its total capital costs or its total indirect and overhead power scheduling costs; provided, however, that nothing in this paragraph (5) shall be deemed to prevent or restrict the Committee from arbitrating pursuant to this subsection 13(i) the level (rather than the allocation) of any of Bonneville's Exhibit I, Schedule A, line 9 total system operations indirect costs and line 11 total system operations overhead costs; Bonneville's Exhibit I, Schedule B, line 11 total system maintenance indirect costs and line 13 total system maintenance overhead costs; Bonneville's total capital costs; Bonneville's Exhibit I, Schedule F, line 6 total indirect contracts and rates costs and Bonneville's Exhibit I, Schedule F, line 7 total overhead contracts and rates costs; or Bonneville's Exhibit I, Schedule G, line 6 total indirect power scheduling costs and Bonneville's Exhibit I, Schedule G, line 7 total overhead power scheduling costs;
- (6) the Committee may not arbitrate any recommendation, or any portion thereof, regarding any amendment to an Operating Plan made pursuant to sections 9(b)(2)(A)(iv) and 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2);
- (7) the Committee may not arbitrate any such recommendation, or portion thereof, to the extent that in doing so the arbitrators would be required to decide a matter of law in order to render a decision pursuant to subsection 14(h). If, subsequent to the Effective Date, Bonneville is given legal authority to submit to binding arbitration matters of law, Bonneville shall enter into

good faith negotiations with Tacoma and Capacity Owners other than Tacoma regarding a revision to this paragraph 13(i)(7) enabling arbitration of matters of law pursuant to this subsection 13(i) consistent with such legal authority; and

- (8) the Committee may not arbitrate any recommendation, or portion thereof, regarding an allocation of a Reinforcement Cost to the extent prohibited by subsection 7(d).

In arbitrating any recommendation, or portion thereof, pursuant to this subsection 13(i), the Committee may raise in support of such recommendation arguments regarding whether any forecast or actual cost should be based upon activities different in degree, but not in kind, from the activities upon which such forecast or actual cost in the Operating Plan is based.

- (j) Each Operating Plan provided pursuant to subsection 13(b) which has completed the Committee review process set forth in subsections 13(d) through 13(g) shall take effect on the first day of the fiscal year to which such Operating Plan pertains and shall remain in effect for the duration of such fiscal year.
- (k) At any time during the fiscal year in which an Operating Plan is in effect, or within 8 months after the end of such fiscal year, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast or actual Operations Cost, Maintenance Cost, General Plant Cost, Other Cost, Contracts and Rates Cost, Power Scheduling Cost, or End of Term Cost in such Operating Plan. At any time during the fiscal year an Operating Plan is in effect, or within 30 months after a work order for a Replacement or Reinforcement is closed, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast cost or actual cost component for such Replacement or Reinforcement.

- (l) Any amendment made to any Operating Plan pursuant to subsection 13(k) shall be provided by delivery of a copy in writing of such amendment by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (m) Consideration of amendments to the Operating Plan pursuant to subsection 13(l) shall be consistent with the procedures set forth above in subsections 13(c) through 13(k), except that the time limits set forth in such subsections shall be reduced as follows: 15 days shall be 7 days, 20 days shall be 10 days, 30 days shall be 15 days, and 50 days shall be 25 days. For purposes of computing the time limits in this subsection 13(m), the date Bonneville provides the Capacity Owners with a proposed amendment, pursuant to subsection 13(k), shall be deemed to be the date the annual meeting was convened for purposes of paragraph 13(d)(1) and subsection 13(e).
- (n) Without limiting any of Tacoma's rights and benefits pursuant to subsection 13(i) and sections 14 and 15, any Operating Plan amended pursuant to section 9(b)(2)(A)(v) or 9(b)(2)(B)(iii), or subsection 13(k) shall take effect when such amendment is accepted by the Committee pursuant to subsection 13(e) or 13(h). Any Operating Plan amended pursuant to section 9(b)(2)(A)(iii), 9(b)(2)(A)(iv), 9(b)(2)(B)(i), or 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2) shall take effect as soon as such amendment is delivered by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (o) An Operating Plan shall, during the fiscal year in which such Operating Plan is in effect, establish the costs which Tacoma is obligated to pay pursuant to the terms and conditions of this Agreement. In no event shall such Operating Plan, or any portion thereof, contain or constitute an obligation of Bonneville to undertake, or to expend funds on, activities described or indicated in such Operating Plan.



14. **ARBITRATION**

- (a) During any arbitration process conducted pursuant to this section 14, Tacoma shall act through the Committee. Each of Bonneville and Tacoma agrees to be bound by any decision rendered by the arbitrators in any arbitration brought pursuant to subsection 13(i) and this section 14.
  
- (b) The Committee may initiate arbitration pursuant to subsection 13(i) by taking the following actions:
  - (1) an affirmative vote to initiate arbitration by at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  
  - (2) either of the following:
    - (a) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to subsection 13(i) within the applicable time period established in subsection 13(h); or
  
    - (b) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subsection 14(b) shall set forth in detail the matter or matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (c) Bonneville shall, within 10 Working Days after receipt of the notice by the Committee referred to in subsection 14(b), appoint a second arbitrator and provide by written notice to each Capacity Owner that

has appointed a representative to the Committee the name, street address and telephone number of the arbitrator appointed by Bonneville. The two arbitrators appointed by the Committee and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville.

- (1) If the arbitrators appointed by the Committee and by Bonneville, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville, then within 30 days after the date of the appointment of an arbitrator by Bonneville, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
  - (2) If Bonneville fails to appoint an arbitrator within 15 days after receipt of the notice by the Committee referred to in subsection 14(b), then within 30 days after the date of such notice, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
  - (3) If, pursuant to either paragraph 14(c)(1) or 14(c)(2), the Committee applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Committee shall give Bonneville written notice of such application within 5 days after the date of filing such application.
- (d) The three arbitrators appointed pursuant to subsections 14(b) and 14(c) shall select by a majority vote an alternative pursuant to subsection 14(g).
  - (e) Within 10 days after the appointment of a third arbitrator pursuant to subsection 14(c), the arbitrators shall establish a schedule for submission of written positions by Bonneville and Tacoma,

respectively. The arbitrators must establish a schedule for such submissions pursuant to this subsection 14(e) that will allow the arbitration to be concluded, and the decision of the arbitrators rendered pursuant to subsection 14(g), within 120 days following the date of the appointment of the third arbitrator. A copy of any submission by the Committee to the arbitrators pursuant to this section 14 shall be simultaneously served by the Committee on Bonneville, and a copy of any submission by Bonneville to the arbitrators pursuant to this section 14 shall be simultaneously served by Bonneville on each Capacity Owner that has appointed a representative to the Committee. The Committee shall state, in a letter to the arbitrators, as its proposed alternative to each Bonneville proposal in dispute, the recommendation proposed by the Committee pursuant to subsection 13(g) and rejected in whole or in part by Bonneville pursuant to subsection 13(g). Bonneville shall state its position and proposed resolution of the dispute in a letter to the arbitrators. If Bonneville made a proposal in response to such recommendation of the Committee pursuant to subsection 13(g), then such position and proposed resolution shall set forth such proposal, or if Bonneville made no such proposal, then such position and proposed resolution shall set forth the relevant portion of the Operating Plan. If, however, the arbitration concerns an exception pursuant to paragraph 16(f)(3), then the positions and proposed resolutions of Bonneville and the Committee shall be as established pursuant to such subsection. The Committee may then submit a response to Bonneville's letter, and Bonneville may thereafter submit a reply to the Committee's response. Bonneville and the Committee shall have an equal number of days to prepare and serve their replies.

- (f) No submission by either the Committee or Bonneville to the arbitrators pursuant to subsection 14(e) shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Committee or Bonneville, and for good cause shown, the arbitrators may permit any submission by such Party to exceed 50 pages.

- (g) The arbitrators shall select, as between the Committee's recommendation pursuant to subsection 13(e), on the one hand, and the portion of Bonneville's proposed Operating Plan to which the Committee's recommendation pertains or Bonneville's proposal pursuant to subsection 13(g) not accepted by the Committee, on the other, the alternative which
- (1) is consistent with the provisions of this Agreement and
  - (2) (A) in conformity with the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto, would better achieve the desired result consistent with safety, reliability, and cost-benefit or (B) if there are no such generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area, would, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, be reasonably expected to better achieve the desired result consistent with safety, reliability, and cost-benefit.
- (h) In applying the standards set forth in subsection 14(g), the arbitrators shall take into consideration, among other things (a) that Bonneville and Tacoma each have responsibilities for service to customers within and without the Pacific Northwest region in accordance with applicable law, (b) that Bonneville and others jointly own the PNW AC Intertie and Bonneville owes contractual obligations to those parties regarding the PNW AC Intertie, (c) that Bonneville must operate, as a practical matter, the PNW AC Intertie in coordination with the operation of the interconnected intertie facilities in California, and (d) that the PNW AC Intertie is a major import-export facility important to the service of loads in and out of the region.
- (i) In any arbitration pursuant to this section 14, the arbitrators shall choose, pursuant to subsection 14(g), only between the alternatives proposed by Bonneville and the Committee and shall have no

authority to resolve such arbitration other than by selecting an alternative proposed by either Bonneville or the Committee.

- (j) Upon selection by the arbitrators of an alternative pursuant to subsection 14(g), then Bonneville shall amend the Operating Plan to cause it to conform to the decision of the arbitrators.
- (k) If the arbitrators have not made a selection of an alternative pursuant to subsection 14(i) before the date on which the Operating Plan becomes effective pursuant to subsection 13(j), then Tacoma shall make payments of annual charges pursuant to such Operating Plan. If the arbitrators subsequently select the Committee's alternative, then Bonneville shall, subsequent to amending such Operating Plan pursuant to subsection 14(j), refund to or bill Tacoma its pro rata share of the amount of the incremental difference between the costs set forth in such Operating Plan as amended pursuant to subsection 14(j) and 105 percent of the costs set forth in such Operating Plan, prior to its amendment pursuant to subsection 14(j), to the extent that such costs were incurred during the period from the first day of effectiveness of such Operating Plan pursuant to subsection 13(j) to the date of the arbitrators' decision, such refund to be made pursuant to subsection 9(f) and such payment to be made pursuant to subsection 9(b).
- (l) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 14 equal to  $\frac{1}{1 + (n + 1)}$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay its own expenses related to the arbitration proceeding including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.

- (m) Any judgment rendered by a court of competent jurisdiction upon an award made by the arbitrators pursuant to this section 14 may be entered in any court having jurisdiction thereof.

**15. NONBINDING ARBITRATION**

- (a) The Initiating Party (as defined in paragraph 15(e)(1)) may, subject to the immediately succeeding sentence, elect by written notice to Responding Party (as defined in paragraph 15(e)(1)) to refer to nonbinding arbitration pursuant to the other provisions of this section 15 the following: (i) if the Initiating Party is the Committee, any recommendation by the Committee, or any portion thereof, concerning any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 and (ii) any other issue, dispute, or controversy regarding the Parties' respective rights and obligations pursuant to this Agreement. The Initiating Party's right pursuant to this subsection 15(a) to arbitrate any recommendation or any issue, dispute or controversy shall be subject to the following limitations:

- (1) the Initiating Party may not arbitrate pursuant to this subsection 15(a): (A) any recommendation with respect to an Operating Plan or any amendment to an Operating Plan or (B) any issue, dispute, or controversy, which recommendation, issue, dispute or controversy may be arbitrated pursuant to subsection 13(i) or 16(f);
- (2) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation not permitted to be arbitrated pursuant to paragraphs 13(i)(1), 13(i)(3), 13(i)(4), and 13(i)(8);
- (3) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or

controversy concerning a loss factor or revision to a loss factor set forth in Exhibit E, Part A or Part B pursuant to this Agreement;

- (4) the Committee may not (but the Tacoma or Bonneville may) arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning any right or obligation of Tacoma pursuant to this Agreement that is not a right or obligation, as the case may be, of each other Capacity Owner under its respective Capacity Ownership Agreement; or
- (5) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operating Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs and forecast End of Term Costs set forth in such Operating Plan, the Committee may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 only to the extent that such actual cost exceeds 105 percent of the forecast for such activity or such project; provided, however, that, without limiting any of Tacoma's rights and benefits pursuant to section 16(f), no Initiating Party may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B,

lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 if such actual cost is less than 105 percent of the forecast for such activity or such project; and

- (6) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any issue, dispute, or controversy (A) concerning matters of ratemaking (for purposes of this subsection 15(a), the term "ratemaking" shall mean the determination of matters appropriately determined pursuant to section 7(i) of the Regional Act, including (i) Bonneville's revenue requirements (including without limitation Bonneville's depreciation and repayment standards and planned net revenues for risk, but excluding program level issues determined in the Federal budget process), (ii) Bonneville's cost of service analysis (including functionalization, segmentation, and allocation of costs contained in such analysis, but excluding any allocation of costs contemplated in Exhibit I), (iii) Bonneville's rate design, and (iv) any related environmental analysis of proposed rates; (B) concerning a final action of Bonneville, which final action is not itself performance of any obligation of Bonneville or Bonneville's Administrator under this Agreement; or (C) concerning, or requiring the decision of, a matter not arising under this Agreement or the other Capacity Ownership Agreements.
- (b) Except as otherwise provided in paragraph 15(a)(4), all arbitrations pursuant to this section 15 shall be between Bonneville and the Committee.
- (c) A copy of any submission (including, without limitation, any statement of position or any brief) by the Initiating Party or the Responding Party to the arbitrators pursuant to this section 15 shall be simultaneously served by such party on the Responding Party or Initiating Party, respectively. No submission by either the Initiating



Party or the Responding Party to the arbitrators shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Initiating Party or the Responding Party, and for good cause shown, the arbitrators may permit any submission by such party to exceed 50 pages.

- (d) With respect to any arbitration pursuant to this section 15 of any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) Only the Committee may initiate arbitration with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7. The Committee may initiate nonbinding arbitration pursuant to this section 15 by taking the following actions:
- (A) an affirmative vote to initiate arbitration pursuant to this section 15 by the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
- (B) either of the following:
- (i) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to this section 15 within the applicable time period set forth in subsection 13(h); or
- (ii) giving written notice to Bonneville of the Committee's decision to initiate arbitration

within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subparagraph 15(d)(1)(B) shall (x) indicate that such vote has been taken and (y) set forth in detail the matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (2) The respective rights and obligations of the Committee and of Bonneville with respect to arbitration pursuant to this subsection 15(d), unless otherwise provided in this subsection 15(d), shall be as set forth in subsections 14(d) through 14(l).
  
- (e) With respect to any arbitration pursuant to this section 15 of any issue, dispute, or controversy other than with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
  - (1) The party (which term, for purposes of this subsection 15(e), shall refer to Bonneville, on the one hand, and to the Committee or Tacoma, on the other) initiating arbitration (Initiating Party) shall initiate arbitration pursuant to this section 15 by serving written notice on the other party (Responding Party) of its initiation of arbitration. If the Committee is the party initiating arbitration, the Committee, in addition to serving such notice, shall initiate such arbitration by an affirmative vote to do so of at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one.

The Committee shall indicate that such vote has been taken in such notice to Bonneville. Any such notice by an Initiating Party shall set forth in detail the following: (A) the issue, dispute, or controversy to be arbitrated and the Initiating Party's position regarding such issue, dispute, or controversy; (B) the relief sought by the Initiating Party; and (C) the name, street address, and telephone number of the arbitrator appointed by the Initiating Party. The Responding Party shall, within 15 days after receipt of the notice by the Initiating Party referred to in this subsection 15(e), appoint a second arbitrator and provide written notice to the Initiating Party and to the arbitrator appointed by the Initiating Party of the name, street address and telephone number of the arbitrator appointed by the Responding Party. The arbitrators appointed by the Initiating Party and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party.

- (A) If the arbitrators appointed by the Initiating Party and by the Responding Party, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party, then within 30 days after the date of the appointment of an arbitrator by the Responding Party the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
- (B) If the Responding Party fails to appoint an arbitrator within 15 days after receipt of the notice by the Initiating Party referred to in paragraph 15(e)(1), then within 30 days after the date of such notice the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.

- (C) If, pursuant to either subparagraph 15(e)(1)(A) or 15(e)(1)(B), the Initiating Party applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Initiating Party shall give the Responding Party written notice of such application within one day after the date of filing such application.
- (2) The three arbitrators appointed pursuant to paragraph 15(e)(1) shall decide any issue, dispute, or controversy by majority vote.
- (3) Within 20 days after the appointment of a third arbitrator pursuant to paragraph 15(e)(1) with respect to any arbitration pursuant to this subsection 15(e), the arbitrators shall establish a schedule for the completion of such arbitration. The first day pursuant to such schedule shall be hereafter referred to in this subsection 15(e) as the "Arbitration Commencement Date."
- (4) No later than 15 days after the Arbitration Commencement Date, the Initiating Party may make a single request in writing to the Responding Party for documentation, data, and information relevant to or reasonably necessary to support the Initiating Party's position communicated to the Responding Party pursuant to paragraph 15(e)(1). Such single request may contain multiple parts. The Initiating Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information pursuant to this paragraph.
- (5) The Responding Party shall have 20 days from the date it receives the request from the Initiating Party pursuant to paragraph 15(e)(4) to provide the documentation, data, and information requested; provided, however, that the Responding Party shall be under no obligation pursuant to this paragraph 15(e)(5) (A) to create additional documentation, data, or

information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Initiating Party or (D) if Bonneville is the Responding Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (6) No later than 15 days after the Arbitration Commencement Date, the Responding Party may make a single request in writing to the Initiating Party for documentation, data and information relevant to Initiating Party's position communicated to the Responding Party pursuant to subsection 15(e)(4). Such single request may contain multiple parts. The Responding Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data and information pursuant to this paragraph.
- (7) The Initiating Party shall have 20 days from the date it receives the request from the Responding Party pursuant to paragraph 15(e)(6) to provide the documentation, data and information requested; provided, however, that the Initiating Party shall be under no obligation pursuant to this paragraph 15(e)(7) (A) to create additional documentation, data, or information, (B) to provide documentation, data or information that is not readily available to it, (C) to provide to the Responding Party documentation, data, or information that the Initiating Party has previously provided to the Responding Party or (D) if Bonneville is the Initiating Party, to provide documentation, data, or information that Bonneville would not

otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (8) For purposes of this subsection 15(e), each of the Initiating Party and the Responding Party shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests by it for, documentation, data, and information and responses to such requests.
- (9) Within 65 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may state in reasonable detail its position regarding any issue, dispute or controversy to be arbitrated pursuant to this subsection 15(e) in a letter to the arbitrators and to the other party to the arbitration of such issue, dispute, or controversy. Within 85 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may submit a letter to the arbitrators and to the other party responding to the letter that the other submitted to the arbitrators pursuant to the immediately preceding sentence.
- (10) The arbitrators shall resolve any issue, dispute, or controversy pursuant to this subsection 15(e) by deciding (taking into consideration, among other things, any letter submitted by the Initiating Party or the Responding Party with respect to such issue, dispute, or controversy) whether the position of the Initiating Party or the position of the Responding Party regarding the action taken or proposed to be taken by the Responding Party conforms more closely with the standard for such action set forth in this Agreement. The arbitrators shall have no authority to fashion a resolution of such arbitration other than pursuant to this paragraph 15(e)(10).

- (f) Any selection by the arbitrators of an alternative pursuant to subsection 15(d) and any decision by the arbitrators pursuant to subsection 15(e) shall be reported by the Initiating Party to the Bonneville Administrator (Administrator) for review within 30 days after such selection or decision is made. The Administrator shall either accept or reject in writing such selection or decision. If the Administrator fails to either accept or reject such selection or decision, as the case may be, within 90 days after such selection or decision is made, such selection or decision, as the case may be, shall be deemed to be accepted by the Administrator.
- (g) If the Administrator accepts any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e), such selection or decision shall become binding upon Tacoma and Bonneville at the time of its acceptance.
- (h) The Administrator may reject any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e) only for one or more of the following reasons:
- (1) the arbitrators did not follow the arbitration procedures set forth in this section 15;
  - (2) the arbitrators decided a matter that is not a matter arising under this Agreement as set forth in paragraph 15(a)(6);
  - (3) the arbitrators did not completely apply the appropriate standard for arbitration pursuant to this section 15;
  - (4) the arbitrators granted relief in contravention of this Agreement;

- (5) the arbitrators' decision is not supported by substantial, competent evidence; or
  - (6) implementation of the arbitrators' decision would cause Bonneville to violate a statutory obligation of Bonneville's or would cause Bonneville to breach a contractual obligation not in contravention of this Agreement.
- (i) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 15 equal to  $1 + (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay for its own expenses related to the arbitration proceeding, including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
  - (j) If the Initiating Party elects to arbitrate any issue, dispute, or controversy pursuant to this section 15, the Initiating Party must initiate arbitration of such issue, dispute, or controversy within one year following the occurrence of the event giving rise to such issue, dispute, or controversy. Failure of the Initiating Party to initiate arbitration of any such issue, dispute, or controversy within such one-year period shall constitute a waiver of the Initiating Party's right to arbitrate such issue, dispute, or controversy pursuant to this section 15.

## 16. **AUDIT RIGHTS**

- (a) The Committee shall have the right to perform an audit of Bonneville's books, records, and documents used in or relating to the determination of the Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to the Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months



after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(2)(B).

- (b) The Committee shall have the right to perform an audit of Bonneville's books, records and documents used in or relating to the determination of any Revised Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to any Revised Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(3)(B).
- (c) The Committee shall have the right to audit Bonneville's books, records, and documents (i) used in or relating to the determination of any charge (including, without limitation, any MFU count made pursuant to section I.A of Exhibit I) billed to Tacoma pursuant to paragraph 9(b)(2) and subsection 9(c), or (ii) used in or relating to any billing or refund with respect to any such charge. Such audit shall be performed within 36 months after the date of Bonneville's bill or refund voucher for such charge rendered by Bonneville to Tacoma pursuant to paragraph 9(b)(2) or subsection 9(c), as the case may be.
- (d) Bonneville shall not be responsible to pay any of the expenses incurred by any of the Capacity Owners in performing any audit pursuant to this section 16. Bonneville shall not directly charge Tacoma or any Capacity Owner other than Tacoma for Bonneville's costs incurred by Bonneville with respect to any audit pursuant to this section 16 unless Bonneville develops a general practice of charging, through direct charges, each of its customers for such costs incurred by Bonneville in connection with audits undertaken pursuant to those customers' respective contracts with Bonneville.
- (e) After completing any audit specified above, the Committee shall promptly provide to Bonneville a written report of the results of such audit. If such audit report includes any exception taken as a result of such audit and Bonneville agrees with such exception, Bonneville

shall, within 30 days following Bonneville's receipt of such audit report and consistent with such audit exception,

- (1) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Tacoma a revised bill or refund voucher pursuant to paragraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
- (2) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and either (A) render to Tacoma a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (B) cause to be refunded to Tacoma as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Tacoma's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this subsection 16(e) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such audit report is received by Bonneville to (but excluding) the date on which such amount is refunded to Tacoma.

- (f) If an audit report provided to Bonneville by Tacoma pursuant to subsection 16(e) includes any exception taken as a result of such audit and Bonneville does not agree with such exception, then the following shall apply:
  - (1) Bonneville may, within 30 days following its receipt of such audit report, propose to the Committee a resolution of any

inconsistency noted in any exception taken as a result of such audit;

- (2) If the Committee accepts such resolution proposed by Bonneville, then Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such resolution,
  - (A) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Tacoma a revised bill or refund voucher pursuant to subparagraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
  - (B) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and shall either (i) render to Tacoma a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (ii) cause to be refunded to Tacoma as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Tacoma's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this paragraph 16(f)(2) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such resolution is accepted by the Committee to (but excluding) the date on which such amount is refunded to Tacoma; and

(3) If the Committee does not accept such resolution, if any, proposed by Bonneville with respect to any such exception, or if Bonneville does not propose any such resolution, then the Committee

(A) shall have the right to arbitrate, pursuant to section 14, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to subsection 13(i); and

(B) shall have the right to arbitrate, pursuant to section 15, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to section 15.

The Committee must refer to arbitration pursuant to subparagraph 16(f)(3)(A) or 16(f)(3)(B) any cost to which exception is taken as a result of any audit within eight months after the date the Committee commences such audit. Failure of the Committee to elect to so refer to arbitration any cost within such eight-month period shall be deemed to constitute waiver by the Committee of any right pursuant to this section 16 to arbitrate such cost.

(g) Tacoma shall have the right to participate in any audit pursuant to this section 16 only by acting through the Committee. If Tacoma chooses not to participate in any audit undertaken by the Committee, then Tacoma shall accept the findings of the Committee with respect to such audit and any resolution by the Committee and Bonneville of any inconsistency noted in any exception taken as a result of such audit.

(h) Any audits undertaken by the Committee shall be upon reasonable notice to Bonneville and at reasonable times and shall commence no more frequently than once in any 24 consecutive months. The audit rights provided in this section shall not be construed to permit a general audit of Bonneville's books, records, and documents. Audits

shall be in conformance with generally accepted auditing standards. Prior to and for the duration of any audit, Bonneville shall retain all pertinent books, records, and documents prepared in the normal course of business. After commencement of an audit pursuant to subsection 16(a), 16(b), or 16(c), the Committee may request and Bonneville shall promptly provide reasonably available supporting documentation for any cost or charge subject to audit. If the Committee fails to commence an audit pursuant to subsection 16(a), 16(b), or 16(c) within the time periods set forth in subsection 16(a), 16(b), or 16(c), such failure shall constitute waiver by Tacoma of any right pursuant to this section 16 to arbitrate any charge or refund billed or refunded by Bonneville.

- (i) If Tacoma is operating pursuant to paragraph 3(b)(1), Bonneville shall have the right, at its own expense, to review Tacoma's books, records, and documents that directly pertain to the revenue reportable in Tacoma's accounting system where revenues received for wheeling for other entities would be booked for the purpose of verifying compliance with paragraph 3(b)(1). Bonneville shall have the right to perform such audit no more frequently than once every 36 months.

## **17. PROTECTED AREAS**

Tacoma shall not use its Scheduling Share for transmission of power on the PNW AC Intertie from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by Bonneville unless Tacoma is required by regulatory authority to purchase or provide transmission for the output of such project or unless Bonneville receives sufficient demonstration that a particular project would provide benefits to Bonneville's existing or planned fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program. The Parties agree that System Sales shall not be taken into consideration in any determination of whether Tacoma has used its Scheduling Share for transmission of power on the PNW AC Intertie from the hydroelectric projects referred to in the immediately preceding sentence. For purposes of this section 17, "System Sale" means any sale of power or

energy to Tacoma or by a seller of power or energy, which power or energy is not resource-specific and is delivered to Tacoma at a point that connects one or more resources or transmission systems.

**18. ESTABLISHMENT AND MAINTENANCE OF RATES AND RELIEF FROM REGULATORY ACTION**

- (a) Bonneville shall use good faith efforts to maintain in effect such of the following rates that has been approved by FERC on an interim or final basis, during the rate approval period established by FERC for such rate:
- (1) any rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date;
  - (2) the Initial Successor Rate;
  - (3) the Alternative Successor Rate; and
  - (4) the Bonneville Successor Rate.
- (b) If Bonneville's Administrator submits to FERC a rate that is different from that set forth in Exhibit B, Part A and Part B, on the Effective Date, as the first rate proposed by Bonneville (Initial Successor Rate) to replace the AC-93 rate set forth in Exhibit A or that is for a rate approval period which is less than the remainder of the Term following the expiration of the AC-93 rate, Tacoma may, within 90 days after Bonneville submits the Initial Successor Rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:
- (1) Tacoma may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or

(2) Tacoma may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Tacoma to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:

(A) This Agreement shall terminate upon the date Bonneville receives Tacoma's notification to terminate this Agreement pursuant to this subsection 18(b) except for those rights and obligations set forth in this paragraph 18(b)(2).

(B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Tacoma has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Tacoma's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + I = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Tacoma to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(b).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

I = Interest on A - ((B/540) X A), accruing from (and including) the date of Bonneville's receipt of Tacoma's Initial Lump Sum Payment to (but excluding) the date on which Bonneville receives Tacoma's notification to terminate this Agreement pursuant to this subsection 18(a), at the 5-year Treasury note rate in effect on the date on which Bonneville receives Tacoma's Initial Lump Sum Payment.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(b)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(b)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(b)(2)(B), Bonneville may accelerate payment to Tacoma of the amount of the Refunded Lump Sum Payment.

If Tacoma elects to proceed under this paragraph 18(b)(2), Bonneville shall not develop a rate or charge that would



inequitably allocate to Tacoma and Capacity Owners other than Tacoma, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Tacoma or any Capacity Owner other than Tacoma.

- (c) If FERC approves the Initial Successor Rate, the Alternative Successor Rate (as defined in subsection 18(d)), or the Bonneville Successor Rate (as defined in subsection 18(d)) for a term less than the remainder of the Term following the expiration of the AC-93 rate, and if Bonneville's Administrator thereafter submits to FERC a rate (Replacement Rate) that is different from the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis) or that is for a rate approval period which is less than the remainder of the Term following the expiration of the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis), Tacoma may, within 90 days after Bonneville submits such rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:

- (1) Tacoma may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
- (2) Tacoma may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Tacoma to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:

- (A) This Agreement shall terminate upon the date Bonneville receives Tacoma's notification to terminate this Agreement pursuant to this subsection 18(c) except for those rights and obligations set forth in this paragraph 18(c)(2).
- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Tacoma has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Tacoma's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + R = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Tacoma to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement.

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

R = 2.5 times the amount paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the

immediately preceding fiscal year times the ratio of (a) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the first fiscal year during the proposed rate approval period pursuant to the rate submitted by Bonneville to FERC to replace the immediately preceding annual costs rate over (b) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the same fiscal year were the immediately preceding annual costs rate to remain in effect; provided, however, that the ratio of (a) over (b) shall in no event be less than one for purposes of this subsection.

- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(c)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(c)(2)(B).
- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(c)(2)(B), Bonneville may accelerate payment to Tacoma of the amount of Refunded Lump Sum Payment.

If Tacoma elects to proceed under this paragraph 18(c)(2), Bonneville shall not develop a special rate or charge that would inequitably allocate to Tacoma and Capacity Owners other

than Tacoma, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Tacoma or any Capacity Owner other than Tacoma.

The terms of this subsection 18(c) shall be effective through December 31, 2040.

- (d) If (i) FERC remands or approves a rate which materially differs from the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, or (ii) FERC grants final approval to a rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date, or to the Initial Successor Rate for a rate approval period of less than the remainder of the Term following the expiration of the AC-93 rate, or (iii) FERC remands or disapproves the Initial Successor Rate, then in any such event Bonneville, Tacoma, and Capacity Owners other than Tacoma shall use good faith efforts to develop an alternative successor rate (Alternative Successor Rate) which would place Tacoma in substantially the same position with respect to Tacoma's rights and obligations under this Agreement as if the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, had been approved by FERC for the remainder of the Term following the expiration of the AC-93 rate. Bonneville, Tacoma, and Capacity Owners other than Tacoma shall use good faith efforts to reach agreement on an Alternative Successor Rate within 6 months after the date of the FERC order regarding the Initial Successor Rate contemplated in this subsection 18(d) or within the time period established in such FERC order, whichever is earlier.

- (1) If Bonneville, Tacoma, and Capacity Owners other than Tacoma reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, then Bonneville shall, subject to section 7(i) of the Regional Act, submit such

Alternative Successor Rate to FERC for approval and confirmation.

- (2) If Bonneville, Tacoma, and Capacity Owners other than Tacoma do not reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, Bonneville shall develop a rate, which, among other things, in Bonneville's judgment, protects the rights and obligations of Tacoma and Capacity Owners other than Tacoma and, subject to section 7(i) of the Regional Act, shall submit such rate (Bonneville Successor Rate) to FERC for approval and confirmation:

Nothing in this subsection 18(d) shall limit or otherwise affect any provisions of subsection 18(b) or 18(c).

- (e) If Bonneville, Tacoma, and Capacity Owners other than Tacoma are unable to agree upon an Alternative Successor Rate pursuant to subsection 18(d), or if FERC approves the Alternative Successor Rate for a period of less than 15 years or with terms and conditions that differ from the terms and conditions of the Alternative Successor Rate, or if FERC remands the Alternative Successor Rate, or if FERC approves the Bonneville Successor Rate, Tacoma may elect, within 6 months of any of the foregoing events, to terminate this Agreement and execute a long-term contract with Bonneville for firm wheeling on the PNW-PSW Intertie for a term not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Tacoma's Capacity Ownership Share, pursuant to subsection 18(f).
- (f) Should Tacoma elect to proceed pursuant to paragraph 18(b)(1) or 18(c)(1) or subsection 18(e), the Parties shall take the following steps:
  - (1) Tacoma shall provide Bonneville with written notification of its election to terminate this Agreement and with a written request for a long-term contract for firm wheeling on the PNW-

PSW Intertie for a period not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Tacoma's Capacity Ownership Share.

- (2) As soon as practicable after receipt by Bonneville of the written notice sent pursuant to paragraph 18(f)(1), Bonneville shall offer to Tacoma a long-term contract for firm wheeling on the PNW-PSW Intertie of an amount of power equal to the amount of power specified in Tacoma's written request pursuant to paragraph 18(f)(1), such offered contract to contain other terms and conditions substantially similar to those then being offered by Bonneville to its other firm wheeling customers for transactions on the PNW-PSW Intertie.

The termination date of this Agreement shall be the same date as the effective date of the long-term contract for firm wheeling referred to in this paragraph 18(f)(2), and such date shall in any event be no more than 6 months after Bonneville's receipt of Tacoma's notification pursuant to paragraph 18(f)(1).

- (3) The long-term contract for firm wheeling offered to Tacoma pursuant to paragraph 18(f)(2) shall also contain provisions which:
  - (A) Require Bonneville to credit or pay (any such payment to be made pursuant to paragraph 9(f)(4)), in equal monthly amounts during the term of such long-term contract for firm wheeling, against the amount payable by Tacoma to Bonneville pursuant to such long-term wheeling agreement an amount equal to the "Credited Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) = \text{Credited Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Tacoma to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(e).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

- (B) Require Bonneville, subject to the immediately succeeding sentence, to credit or pay interest on the Credited Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest to be credited or paid pursuant to this provision shall be credited or paid by Bonneville on the amount of each monthly amount of the Credited Lump Sum Payment to be credited or paid by Bonneville pursuant to the provision set forth in subparagraph 18(f)(3)(A).
- (C) Permit Bonneville to accelerate payment to Tacoma of the amount of Credited Lump Sum Payment which remains uncredited at any time during the term of such long-term contract for firm wheeling.
- (g) Tacoma's right to terminate this Agreement pursuant to subsections 18(d) through 18(f) is a one-time only right that must be exercised after FERC action pursuant to subsection 18(d). If Tacoma fails to

terminate the Agreement pursuant to subsection 18(e) as prescribed therein as a result of FERC action, Tacoma shall have no future rights to terminate the Agreement under this section 18 as a result of FERC action.

- (h) Bonneville shall use best efforts to establish and maintain in effect the AC-93 rate, set forth in Exhibit A, during the remainder of the Term, but only until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), that is confirmed and approved by FERC on an interim or final basis, becomes effective. If FERC does not confirm and approve on a final basis the AC-93 rate for a rate approval period of sufficient duration so that the AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or such other rate, becomes effective, then upon expiration of the rate approval period of such AC-93 rate, Bonneville shall submit to FERC a rate based on the methodology used to determine the AC-93 rate (revised AC-93 rate) and shall use best efforts to obtain a rate approval period for the revised AC-93 rate of sufficient duration so that the revised AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), becomes effective. If, at any time during the Term, FERC does not confirm and approve on an interim or final basis the AC-93 rate or revised AC-93 rate for any reason other than the duration of the rate approval period, Bonneville and Tacoma shall use best efforts to develop a rate that would replace the AC-93 rate or revised AC-93 rate, and Bonneville shall submit such rate to FERC, pursuant to section 7(i) of the Regional Act, for confirmation and approval if such rate is agreed to by Bonneville, Tacoma and Capacity Owners other than Tacoma. If Bonneville and Tacoma do not succeed in developing such rate, Bonneville shall submit to FERC, pursuant to section 7(i) of the Regional Act, a rate which in Bonneville's judgment recovers Bonneville's costs. Bonneville shall bill Tacoma, and Tacoma shall pay Bonneville, in accordance with the AC-93 rate or, if FERC does not confirm and approve on an interim or final basis the AC-93 rate, the rate confirmed and approved by FERC on an interim or final



basis. Bonneville shall revise Exhibit A so that it contains, at a given time, the AC-93 or other rate confirmed and approved by FERC on an interim or final basis.

19. **EXHIBITS**

- (a) Exhibits A through J attached to this Agreement are by this reference made a part of this Agreement. In the event of a conflict between any provision in Exhibits A through J and the provisions of sections 1 through 23 of this Agreement, the provisions of sections 1 through 23 of this Agreement shall prevail.
- (b) Bonneville shall revise Exhibit A pursuant to subsections 18(g) and 18(h) and this subsection 19(b). The rate schedules attached hereto as Exhibit A have been conditionally or finally confirmed by FERC. If the final rate schedules which are approved by FERC are an amendment or modification of the initial rate schedules, the applicable amended or modified rate schedules and associated GTRSPs shall be attached to and made part of this Agreement effective as of the date specified in FERC's approval. The rate schedules and GTRSPs included in Exhibit A shall be replaced by successor rate schedules and provisions in accordance with the provisions of section 7(i) of the Regional Act and FERC rules.
- (c) Upon interim or final approval by FERC of any rate submitted to FERC pursuant to subsections 18(a) through 18(g), Bonneville shall revise Exhibit B so that Exhibit B contains such rate approved by FERC as contemplated in this subsection 19(c). For purposes of this Agreement, such rate shall be effective as of the date of effectiveness specified in FERC's approval of such rate. Subject to the provisions of subsections 18(a) through 18(g), the rate schedule set forth in Exhibit B, Part A and Part B, on the Effective Date, shall be replaced by successor rate schedules and provisions pursuant to section 7(i) of the Northwest Power Act and applicable FERC rules.

- (d) Bonneville shall revise or modify Exhibit C from time to time to reflect changes hereafter agreed to in writing by the Parties in Tacoma's Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share.
- (e) Bonneville shall revise Exhibit D pursuant to subsection 9(a). Revision or modification of Exhibit D shall not require an executed amendment or revision to this Agreement.
- (f) Not more frequently than annually, Bonneville shall review and, as appropriate, revise Exhibit E, Part A, in accordance with Bonneville's standard methodology and formula for calculation of average losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie. Such methodology and formula are intended to forecast average annual actual losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie Operational Transfer Capability. Any changes to the loss methodology or formula, other than numerical values, shall be made only after consultation with the Committee. During such consultation, Bonneville shall provide to the Committee material pertinent to such changes to the loss methodology or formula. Upon conclusion of any review of the loss factor in Exhibit E, Part A, Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan pursuant to section 13. If the Committee pursues arbitration pursuant to subsection 10(b) and section 14, Bonneville shall revise Exhibit E, Part A, to reflect the selection of the arbitrators pursuant to subsection 14(j).
- (g) Bonneville shall revise the loss factor in Exhibit E, Part B, as necessary to equal the same factor for average losses as Bonneville generally applies to transmission over Bonneville's share of the PNW-PSW Intertie. Revision of Exhibit E, Part B, shall not require an executed amendment or revision to this Agreement.
- (h) Bonneville shall revise Exhibit F as appropriate to reflect the facilities in Bonneville's PNW AC Intertie. Revision or modification of

Exhibit F shall not require an executed amendment or revision to this Agreement.

- (i) Bonneville shall revise Exhibit G as appropriate to reflect the complete list of all of the Capacity Owners and their respective Capacity Ownership Shares and Capacity Ownership Percentages from time to time pursuant to this Agreement.
- (j) Bonneville shall revise Exhibit H as appropriate to reflect all provisions required by statute or Executive Order. Revision or modification of Exhibit H shall not require an executed amendment or revision to this Agreement.
- (k) Bonneville shall revise Exhibit I to reflect changes as agreed to in writing by Tacoma and Capacity Owners other than Tacoma.
- (l) Bonneville shall revise Exhibit J as mutually agreed to in writing by the Parties.

## 20. RULES OF LAW

- (a) Bonneville and Tacoma agree that each fully participated in the drafting of each provision of this Agreement. The rule of law interpreting ambiguities against the drafting Party shall not be applicable to or utilized in resolving any dispute over the meaning or intent of this Agreement or any of its provisions.
- (b) This Agreement shall not be construed to establish a partnership, association, agency relationship, joint venture, or trust. Neither Party shall be under the control of or shall be or represent itself as, the agent of, or have a right or power to bind, the other Party without the other's express written consent, except as provided in this Agreement.
- (c) All applicable law is incorporated in and made part of this Agreement.

21. NOTICES

- (a) Unless the Agreement requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be served, given, or made if delivered in person or sent by acknowledged delivery, or sent by registered or certified mail, postage prepaid, to the persons addressed as set forth below:

**To Bonneville:**

Group Vice President for Marketing, Conservation and Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232

**To Puget:**

Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515

**To Seattle:**

Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101

**To PNGC:**

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232

To Snohomish:  
Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201

To Tacoma:  
Power Manager  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411

- (b) Either Party may, by written notice to the other Party pursuant to subsection 21(a), change the address set forth in subsection 21(a) for the notifying Party.
- (c) All notices pursuant to this Agreement shall be effective on the date of receipt.

**22. WAIVER**

Any waiver at any time by a Party of its rights with respect to any matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent or other matter. Except as otherwise provided herein or as agreed in writing by the Parties, no provision in this Agreement may be waived except as documented or confirmed in writing.

**23. MISCELLANEOUS**

**(a) Effect of Section Headings**

Section headings and subheadings appearing in this Agreement are inserted for convenience only and shall not be construed as interpretations of provisions of this Agreement.

(b) **Amendments**

Except as may be expressly otherwise provided in this Agreement, this Agreement may be amended only with the express written consent of both of the Parties, and no provision of this Agreement shall be varied or contradicted by any oral agreement, course of dealing or performance or any other matter not hereafter set forth in a written agreement signed by both of the Parties.

(c) **Entire Agreement**

This Agreement constitutes, on and as of the date hereof, the entire agreement of the Parties with respect to the subject matter of this Agreement, and all prior understandings or agreements, whether written or oral, between the Parties with respect to the subject matter of this Agreement are hereby superseded in their entirety.

(d) **No Third Party Beneficiaries**

There are no third party beneficiaries of this Agreement. This Agreement shall not be construed to create rights in, or to grant remedies to, any third party as a beneficiary of this Agreement or of any duty, obligation, or undertaking established herein.

(e) **Regulatory Approvals**

Each Party shall use its best efforts to obtain and maintain in effect regulatory approvals that are necessary to permit such Party to perform its obligations under this Agreement in accordance with its terms and conditions. Neither Party shall oppose in any way or seek to alter or amend the terms and conditions of this Agreement by application to or participation in any application of any regulatory authority or court having jurisdiction. Tacoma shall not oppose in any way or seek to alter or amend the terms or conditions of the annual costs rate set forth in Exhibit B, the CO-94 rate, the AC-93 rate, or

any rate described in section 18 that is agreed to by the Parties subsequent to each entering into this Agreement, in any proceeding pursuant to section 7 of the Pacific Northwest Electric Power Planning and Conservation Act before FERC or in any court of competent jurisdiction.

**(f) Other Capacity Ownership Agreements**

If Bonneville offers to enter into (i) a Capacity Ownership Agreement with any other Capacity Owner or (ii) any written amendment of any Capacity Ownership Agreement (other than this Agreement), then Bonneville shall offer to Tacoma an amendment of this Agreement that contains the terms and conditions of such Capacity Ownership Agreement with such other Capacity Owner or of such written amendment, as the case may be. Bonneville shall advise, and use reasonable efforts to consult with, Tacoma during the development or consideration of any offer to any Capacity Owner other than Tacoma to enter into a Capacity Ownership Agreement or any amendment of such agreement.

**(g) Singular and Plural Forms**

For purposes of interpreting and construing this Agreement, the singular form of a word shall include its plural and the plural form of a word shall include its singular, unless otherwise expressly provided by this Agreement.

**(h) Performance Pending Dispute**

Except as otherwise expressly provided in this Agreement, pending resolution of any dispute, issue, or controversy arising under this Agreement, the Parties shall each continue performance of their respective obligations pursuant to this Agreement.

(i) **Time Periods**

For purposes of calculating any time period prescribed by this Agreement, if the last day of the time period falls on a day that is not a Working Day, then the last day of the time period shall be the first Working Day following such day as would otherwise be the last day of the time period.

(j) **Double Counting**

In developing rates or charges under section 7 of the Pacific Northwest Electric Power Planning and Conservation Act for any rate period, Bonneville shall not set rates or charges that recover, more than once, the costs associated with capital projects that are paid or forecast to be paid under the CO-94 rate and the AC-93 rate and annual costs rate set forth in Exhibit B, or the remaining Bonneville's PNW AC Intertie costs forecast to be paid under the AC-93 rate and annual costs rate set forth in Exhibit B. Bonneville's forecast of revenues chargeable under the CO-94 rate, AC-93 rate, and annual costs rate set forth in Exhibit B shall be based on the best available information, including information provided pursuant to section 13 of this Agreement.

In the event Bonneville proposes any wheeling rate for transmission service on Bonneville's main grid that includes costs of the PNW AC Intertie, such proposed rate shall include a credit or other mechanism that ensures that Tacoma is not charged any of the PNW AC Intertie costs for deliveries of power that utilize up to the Tacoma's Capacity Ownership Share, as that term is defined in this Agreement.

(k) **Committee Action**

Each of the Parties agrees that to the extent it is provided in sections 13, 14, and 16 that the Committee shall take any action or shall make any decision, such action or decision shall be taken or made, as the



case may be, by the Committee, and not by Tacoma acting individually.

(l) **Fiscal Year**

For purposes of this Agreement, the term "fiscal year" shall mean Bonneville's fiscal year.

(m) **Rights and Remedies Cumulative**

All rights and remedies of either Party under this Agreement and at law and in equity shall be cumulative and not mutually exclusive and the exercise of one right or remedy shall not be deemed a waiver of any other right or remedy. Nothing contained in any provision of this Agreement shall be construed to limit or exclude any right or remedy of either Party (arising on account of the breach or default by the other Party or otherwise) now or hereafter existing under any other provision of this Agreement, at law or in equity.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

/s/ WALTER E. POLLOCK  
Group Vice President for Marketing,  
Conservation and Production

By Walter E. Pollock  
Group Vice President for Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

September Date September 27, 1994

City of Tacoma, Department of Public Utilities

By Mark Crisson

Name Mark Crisson  
(Print/Type)

Title Director of Utilities

Date September 23, 1994

Approved as to form & legality:  
Mark Bubnik  
Chief Asst. City Attorney

/s/ MARK BUBENIK  
Chief Assistant City Attorney

Effective Date September 27, 1994

/s/ MARK CRISSON  
Director of Utilities  
September 23, 1994

Exhibit A, Page 1 of 1  
Contract No. DE-MS79-94BP94524  
Tacoma Public Utilities  
Effective on the Effective Date

**CO-94, AC-93, IS-93 Rate Schedules and General Transmission  
Rate Schedule Provisions**

Schedule CO-94  
CAPACITY OWNERSHIP RATE SCHEDULE

**Section I. Availability**

This schedule applies to all agreements which provide life-of-facilities capacity rights to non-Federal participants (Capacity Owners) in 725 MW of Bonneville's PNW AC Intertie and any upgrades thereto. Service under this schedule is subject to Bonneville's General Transmission Rate Schedule Provisions.

**Section II. Rate**

The charge for capital and related costs for non-Federal capacity ownership in Bonneville's PNW AC Intertie shall be determined by the methodologies set out in Section III below.

**Section III. Determination of Rate**

**A. Capacity Ownership Price**

The charge for capacity ownership in Bonneville's PNW AC Intertie shall be the Capacity Ownership Share of the actual capital and related costs of facilities as determined by the formula shown below. The Capacity Ownership Share shall be determined pursuant to the Capacity Ownership agreement.

$$\frac{(A - B) + C + D}{E} = \text{Capacity Ownership Price in } \$/\text{kW}$$

Capacity Ownership Price in \$/kW x number of kW contracted for by Capacity Owner = Capacity Owner's payment to Bonneville

Where:

**A =** Bonneville's cost of new facilities for the Third AC Intertie, which increased the rated transfer capability of the PNW AC Intertie by approximately 1600 MW, is the construction costs (including direct, indirect and overhead costs) of the facilities associated with the Third AC Intertie System Reinforcements and the Alvey-Meridian

Transmission Line ( also known as Eugene-Medford 500-kV Transmission Line), referred to jointly as the Third AC Intertie Project.

- B = Bonneville's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project, which includes a portion of the construction costs (including direct, indirect and overhead costs) associated with the Third AC Intertie System Reinforcement.
- A-B = The cost of new facilities for the second 800 MW increment of the 1600 MW Third AC Intertie Project (presented in Exhibit C of the Capacity Ownership agreement).
- C = Allowance for Funds Used During Construction (AFUDC) constitutes interest on the funds used for the Third AC Intertie Project while it was under construction. AFUDC is calculated and capitalized consistent with FERC requirements as described in FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions, 3.A(17). The AFUDC applies to that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.
- D = Book value of existing Bonneville support facilities that are dedicated to the PNW AC Intertie equal to \$19,100,000.
- E = 725,000 kW, which equals Bonneville's share of the second 800 MW of the Third AC Intertie.

**B. PNW AC Intertie Upgrade Price**

The charge for upgrades to Bonneville's PNW AC Intertie facilities that occur after December 1993, and which result in an increase of rated transfer capability, shall be the Capacity Ownership Share of the capital and related costs of the upgrade. The Capacity Ownership Share of any upgrades shall be determined pursuant to the Capacity Ownership agreement. The capital costs shall consist of the construction costs (including direct, indirect and overhead costs) and AFUDC (as described in Section III.A. above) of the facilities associated with such upgrades.

#### **Section IV. Adjustments and Special Provisions**

##### **A. Initial Lump Sum Payment**

Capacity Owners shall make an initial, lump sum payment of an estimate of the Capacity Ownership Price equal to \$215/kW pursuant to the Capacity Ownership agreement.

##### **B. Adjustment to Reflect Actual Construction Costs**

Approximately December 1995 or as soon as practicable thereafter, the Capacity Owner's initial lump sum payment shall be adjusted to reflect the difference between the actual and the estimated Capacity Ownership Price. The actual Capacity Ownership Price shall be determined pursuant to Section III.A. above. There will be no adjustment for the book value of the support facilities dedicated to the PNW AC Intertie. Capacity Owners will either receive a refund, with interest, from Bonneville or make an additional payment, with interest, to Bonneville. Bonneville shall compute interest using the weighted average interest rate on Bonneville's outstanding bonds.

##### **C. PNW AC Intertie Upgrade Payments**

Capacity Owners shall pay a share of the upgrades to Bonneville's PNW AC Intertie in the manner and time to be determined when participation in such upgrades are agreed to pursuant to the Capacity Ownership agreement.

Schedule AC-93  
Southern Intertie Annual Cost

SECTION I. AVAILABILITY

This schedule is applicable to all parties (New Owners) that execute PNW AC Intertie Capacity Ownership Agreements (Agreements) and will be effective on the date described in the Agreement. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

The rate charges reflect the terms of the Memorandum of Understanding (MOU), signed in the Fall of 1991, between BPA and potential New Owners. The MOU provides for the payment by New Owners of their prorated share of: (1) BPA's annual operations, maintenance, and general plant expense (including applicable overheads) properly chargeable to the AC Intertie facilities; and (2) BPA's share of capitalized replacements on the AC Intertie. The monthly charge shall be the sum of the charges specified in sections II.A and II.B.

A. Operations, Maintenance, and General Plant

The monthly charge shall equal \$325 per megawatt of billing demand.

B. Replacements

The monthly charge shall equal \$0 per megawatt of billing demand.

SECTION III. ADJUSTMENT TO REPLACEMENTS RATE

A. Determination of Billing Adjustment

New Owners will receive a billing adjustment if BPA incurs AC Intertie replacement cost during the rate period. The Replacements Rate Adjustment equals:

$$\frac{\text{AC Intertie work orders (\$(K))} \cdot \%}{725 \text{ MW} \cdot \# \text{ months}}$$

where:

"# months" equals: (1) the number of months that this rate schedule is in effect during the fiscal year for the Initial Replacements Rate Adjustment; or (2) the number of months in the rate period for the Final Replacements Rate Adjustment; and

"%" equals the New Owners' percentage share of BPA's total AC Intertie Rated Transfer Capability as specified in the Agreements.

B. Initial Replacements Rate Adjustment

New Owners will receive a billing adjustment for each fiscal year that BPA incurs AC Intertie replacement cost. At the end of each fiscal year, the cost associated with AC Intertie capital replacement work orders that have closed during the fiscal year will be determined. The unit rate that would result using these closed work orders is the basis of the Initial Replacements Rate Adjustment.

I. Notice Provisions

Following each fiscal year, BPA shall notify all New Owners by December 15 of the proposed Replacements Rate Adjustment. BPA will provide the calculation of the adjustment and a short description of the work performed and the associated cost used as the basis for the billing adjustment. In addition to written notification, BPA may, but is not obligated to, hold a public meeting to clarify its determinations.

Schedule AC-93  
(Continued)

Written comments on the Initial Replacements Rate Adjustment will be accepted through the end of January. Consideration of comments submitted by the New Owners may result in the billing adjustment differing from the initially proposed adjustment. BPA shall notify all New Owners of the Initial Replacements Rate Adjustment by the last day of February.

2. Adjustment of Monthly Bills

An adjustment will be made on the New Owner's monthly bill prepared during March. The Initial Replacements Rate adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal year (i.e., the New Owner's share in megawatts of BPA's PNW AC Inter tie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal year). The Initial Replacements Rate Adjustment will appear as a charge to the New Owner on the monthly bill prepared during March.

C. Final Replacements Rate Adjustment

The actual costs associated with the AC Inter tie capital replacement work orders that occur during the rate period may change after BPA performs its final analysis of the work orders. BPA shall compare the unit rate for the rate period using the results of the final work order analysis to the weighted average of the unit rates from the Initial Replacements Rate Adjustments.

1. Notice Provisions

BPA shall notify all New Owners in May 1998 of the results of the calculations, an explanation of work

order change(s), and any resulting billing adjustment. Written comments from New Owners will be accepted through the end of June. BPA shall notify all New Owners of the Final Replacements Rate Adjustment by July 31. Consideration of comments submitted by the New Owners may result in the Final Replacements Rate Adjustment differing from the initially proposed adjustment.

2. Adjustment of Monthly Bills

If the absolute value of the Final Replacements Rate Adjustment is greater than or equal to \$1 per megawatt per month, an adjustment will be made on the New Owner's monthly bill prepared during August. For each New Owner, the Final Replacements Rate Adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal years (i.e., the New Owner's share in megawatts of BPA's PNW AC Inter tie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal years). The Final Replacements Rate Adjustment will appear as a charge or credit to the New Owner on the monthly bill prepared during August. Interest, as determined by BPA's Office of Financial Management, will be included in any adjustment.

SECTION IV. BILLING FACTOR

The billing demand shall be the New Owner's capacity ownership share in megawatts of BPA's PNW AC Inter tie Rated Transfer Capability as specified in the Agreement.



Schedule IS-93  
Southern Intertie Transmission

SECTION I. AVAILABILITY

This schedule supersedes IS-91 and is available for all transmission on the Southern Intertie. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

A. Nonfirm Transmission Rate

The charge for nonfirm transmission of non-BPA power shall be 3.11 mills per kilowatthour of billing energy. This charge applies for both north-to-south and south-to-north transactions.

B. Firm Transmission Rate

The charge for firm transmission service shall be \$0.706 per kilowatt per month of billing demand and 1.69 mills per kilowatthour of billing energy. Firm transmission will only be made available to customers under this rate schedule who have executed a contract with BPA specifying use of the Firm Transmission rate for either north-to-south or south-to-north transactions.

SECTION III. BILLING FACTORS

- A. For services under Section II.A, the billing energy shall be the monthly sum of the scheduled kilowatthours, plus the monthly sum of kilowatthours allocated but not scheduled. The amount of allocated but not scheduled energy that is subject to billing may be reduced pro rata by BPA due to forced Intertie outages and other uncontrollable forces that may reduce Intertie capacity. The amount of allocated but not scheduled energy that is subject to billing

also may be reduced upon mutual agreement between BPA and the customer.

- B. For services under Section II.B, the billing demand shall be the Transmission Demand as defined in the Agreement. The billing energy shall be the monthly sum of scheduled kilowatthours, unless otherwise specified in the Agreement.

## General Transmission Rate Schedule Provisions

### SECTION I. ADOPTION OF REVISED TRANSMISSION RATE SCHEDULES AND GENERAL TRANSMISSION RATE SCHEDULE PROVISIONS (GTRSPs)

#### A. Approval of Rates

These rate schedules and GTRSPs shall become effective upon interim approval or upon final confirmation and approval by FERC. BPA will request FERC approval effective October 1, 1993.

#### B. General Provisions

These 1993 Transmission Rate Schedules and associated GTRSPs are virtually identical to and supersede BPA's 1991 Transmission Rate Schedules and GTRSPs (which became effective October 1, 1991) but do not supersede prior rate schedules required by agreement to remain in force.

Transmission service provided shall be subject to the following Acts, as amended: the Bonneville Project Act, the Regional Preference Act (P.L. 88-552), the Federal Columbia River Transmission System Act, and the Pacific Northwest Electric Power Planning and Conservation Act, and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992).

The meaning of terms used in the transmission rate schedules shall be as defined in agreements or provisions which are attached to the Agreement or as in any of the above Acts.

#### C. Interpretation

If a provision in the executed Agreement is in conflict with a provision contained herein, the former shall prevail.

### SECTION II. BILLING FACTOR DEFINITIONS AND BILLING ADJUSTMENTS

#### A. Billing Factors

##### 1. Scheduled Demand

The largest of hourly amounts wheeled which are scheduled by the customer during the time period specified in the rate schedules.

##### 2. Metered Demand

The Metered Demand in kilowatts shall be the largest of the 60-minute clock-hour integrated demands measured by meters installed at each POD during each time period specified in the applicable rate schedule. Such measurements shall be made as specified in the Agreement. BPA, in determining the Metered Demand, will exclude any abnormal readings due to or resulting from: (a) emergencies or breakdowns on, or maintenance of, the FCRTS; or (b) emergencies on the customer's facilities, provided that such facilities have been adequately maintained and prudently operated as determined by BPA. If more than one class of power is delivered to any POD, the portion of the metered quantities assigned to any class of power shall be as agreed to by the parties. The amount so assigned shall constitute the Metered Demand for such class of power.

3. Transmission Demand

The demand as defined in the Agreement.

4. Total Transmission Demand

The sum of the transmission demands as defined in the Agreement.

5. Ratchet Demand

The maximum demand established during the previous 11 billing months. Exception: If a Transmission Demand or Total Transmission Demand has been decreased pursuant to the terms of the Agreement during the previous 11 billing months, such decrease will be reflected in determining the Ratchet Demand.

B. Billing Adjustments

Average Power Factor

The adjustment for average power factor, when specified in a transmission rate schedule or in the Agreement, shall be made in accordance with the average power factor section of the General Wheeling Provisions.

To maintain acceptable operating conditions on the Federal system, BPA may restrict deliveries of power at any time that the average leading power factor or average lagging power factor for all classes of power delivered to such point or to such system is below 85 percent.

SECTION III. OTHER DEFINITIONS

Definitions of the terms below shall be applied to these provisions and the Transmission Rate Schedules, unless otherwise defined in the Agreement.

A. Agreement

An agreement between BPA and a customer to which these rate schedules and provisions may be applied.

B. Eastern Intertie

The segment of the FCRTS for which the transmission facilities consist of the Townsend-Garrison double-circuit 500 kV transmission line segment including related terminals at Garrison.

C. Electric Power

Electric peaking capacity (kW) and/or electric energy (kWh).

D. Federal Columbia River Transmission System

The transmission facilities of the Federal Columbia River Power System, which include all transmission facilities owned by the government and operated by BPA, and other facilities over which BPA has obtained transmission rights.

E. Firm Transmission Service

Transmission service which BPA provides for any non-BPA power except for transmission service which is scheduled as nonfirm. If the firm service is provided pursuant to the Agreement, the terms of the Agreement may further define the service.

F. Integrated Network

The segment of the FCRTS for which the transmission facilities provide the bulk of transmission of electric power within the Pacific Northwest, excluding facilities not segmented to the network as shown in the Wholesale Power Rate Development Study used in BPA's rate development.

**G. Main Grid**

As used in the FPT and IR rate schedules, that portion of the Integrated Network with facilities rated 230 kV and higher.

**H. Main Grid Distance**

As used in the FPT rate schedules, the distance in airline miles on the Main Grid between the POI and the POD, multiplied by 1.15.

**I. Main Grid Interconnection Terminal**

As used in the FPT rate schedules, Main Grid terminal facilities that interconnect the FCRTS with non-BPA facilities.

**J. Main Grid Miscellaneous Facilities**

As used in the FPT rate schedules, switching, transformation, and other facilities of the Main Grid not included in other components.

**K. Main Grid Terminal**

As used in the FPT rate schedules, the Main Grid terminal facilities located at the sending and/or receiving end of a line exclusive of the Interconnection terminals.

**L. Nonfirm Transmission Service**

Interruptible transmission service which BPA may provide for non-BPA power.

**M. Northern Intertie**

The segment of the FCRTS for which the transmission facilities consist of two 500 kV lines between Ouster Substation and the United States-Canadian border, one 500 kV line between Ouster and Monroe Substations, and two 230 kV lines from Boundary Substation to the United States-Canadian border, and the associated substation facilities.

**N. Point of Integration (POI)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is made available to BPA for wheeling.

**O. Point of Delivery (POD)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is delivered to a customer by BPA.

**P. Secondary System**

As used in the FPT and IR rate schedules, that portion of the Integrated Network facilities with operating voltage of 115 kV or 69 kV.

**Q. Secondary System Distance**

As used in the FPT rate schedules, the number of circuit miles of Secondary System transmission lines between the secondary POI and the Main Grid or the secondary POD, or the Main Grid and the secondary POD.

**R. Secondary System Interconnection Terminal**

As used in the FPT rate schedules, the terminal facilities on the Secondary System that interconnect the FCRTS with non-BPA facilities.

**S. Secondary System Intermediate Terminal**

As used in the FPT rate schedules, the first and final terminal facilities in the Secondary System transmission path exclusive of the Secondary System Interconnection terminals.

**T. Secondary Transformation**

As used in the FPT rate schedules, transformation from Main Grid to Secondary System facilities.

#### U. Southern Intertie

The segment of the FCRTS for which the major transmission facilities consist of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; when completed, the Third AC facilities, which include Captain Jack Substation and the Alvey-Meridian 500 kV AC line; one 1,000 kV DC line between the Celilo Substation and the Oregon-Nevada border; and associated substation facilities.

#### V. Transmission Service

As used in the MT rate schedule, Transmission Service is as defined in the Western Systems Power Pool Agreement.

### SECTION IV. BILLING INFORMATION

#### A. Payment of Bills

Bills for transmission service shall be rendered monthly by BPA. Failure to receive a bill shall not release the customer from liability for payment. Bills for amounts due of \$50,000 or more must be paid by direct wire transfer; customers who expect that their average monthly bill will not exceed \$50,000 and who expect special difficulties in meeting this requirement may request, and BPA may approve, an exemption from this requirement. Bills for amounts due BPA under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by BPA. The procedures to be followed in making direct wire transfers will be provided by the Office of Financial Management and updated as necessary.

##### 1. Computation of Bills

The transmission billing determinant is the electric power quantified by the

method specified in the Agreement or Transmission Rate Schedule. Scheduled power or metered power will be used.

The transmission customer shall provide necessary information to BPA for any computation required to determine the proper charges for use of the FCRTS, and shall cooperate with BPA in the exchange of additional information which may be reasonably useful for respective operations.

Demand and energy billings for transmission service under each applicable rate schedule shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amount from 50 cents through 99 cents to the next higher dollar.

##### 2. Estimated Bills

At its option, BPA may elect to render an estimated bill to be followed at a subsequent billing date by a final bill. The estimated bill shall have the validity of and be subject to the same payment provisions as a final bill.

##### 3. Billing Month

For charges based on scheduled quantities, the billing month is the calendar month. For charges based on metered quantities, the billing month is defined as the interval between scheduled meter-reading dates. The billing month will not exceed 31 days in any case. While it may be necessary to read meters on a day other than the scheduled meter-reading date, for determination of billing demand, the billing month will cease at 2400 hours on the last scheduled meter-reading date. Schedules will be predetermined. The customer must give 30 days notice to request a change to the schedule.

4. Due Date

Bills shall be due by close of business on the 20th day after the date of the bill (due date). Should the 20th day be a Saturday, Sunday, or holiday (as celebrated by the customer), the due date shall be the next following business day.

5. Late Payment

Bills not paid in full on or before close of business on the due date shall be subject to a penalty charge of \$25. In addition, an interest charge of one-twentieth percent (0.05 percent) shall be applied each day to the sum of the unpaid amount and the penalty charge. This interest charge shall be assessed on a daily basis until such time as the unpaid amount and penalty charge are paid in full.

Remittances received by mail will be accepted without assessment of the charges referred to in the preceding paragraph provided the postmark indicates the payment was mailed on or before the due date. Whenever a power bill or a portion thereof remains unpaid subsequent to the due date and after giving 30 days' advance notice in writing, BPA may cancel the contract for service to the customer. However, such cancellation shall not affect the customer's liability for any charges accrued prior thereto under such agreement.

6. Disputed Billings

In the event of a disputed billing, full payment shall be rendered to BPA and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified above. BPA shall separately account for the disputed amount. If it is determined that the customer is entitled to the disputed

amount, BPA shall refund the disputed amount with interest, as determined by BPA's Office of Financial Management.

BPA retains the right to verify, in a manner satisfactory to the Administrator, all data submitted to BPA for use in the calculation of BPA's rates and corresponding rate adjustments. BPA also retains the right to deny eligibility for any BPA rate or corresponding rate adjustment until all submitted data have been accepted by BPA as complete, accurate, and appropriate for the rate or adjustment under consideration.

7. Revised Bills

As necessary, BPA may render a revised bill.

- a. If the amount of the revised bill is less than or equal to the amount of the original bill, the revised bill shall replace all previous bills issued by BPA that pertain to the specified customer for the specified billing period and the revised bill shall have the same date as the replaced bill.
- b. If a revision causes an additional amount to be due BPA or the specified customer beyond the amount of the original bill, a revised bill will be issued for the difference and the date of the revised bill shall be its date of issue.

## Annual Costs Rate

### A. PROPOSED SOUTHERN INTERTIE ANNUAL COST RATE

#### SECTION I. AVAILABILITY

This schedule is applicable to each party (Capacity Owner) that executes a PNW AC Intertie Capacity Ownership Agreement (Agreement). Billings pursuant to this schedule is subject to the Billing Provisions in Exhibit B of the Agreement. This rate schedule shall be effective on the first day of the fiscal year following the earlier of interim or final FERC approval of this rate schedule. Unless otherwise defined in this rate schedule, capitalized terms used in this rate schedule shall have the respective definitions set forth in section 1 of this Agreement.

#### SECTION II. RATE

##### A. Operations

The monthly charge equals:

$$\frac{\text{Operations Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Operations Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Operations Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville’s PNW AC Intertie, operations Indirect Costs for Bonneville’s PNW AC Intertie, and operations Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Operations rate shall be calculated using the forecast Operations Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is

amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Operations Cost shall be calculated using the forecast Operations Cost less the Operations Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **B. Maintenance**

The monthly charge equals:

$$\frac{\text{Maintenance Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Maintenance Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Maintenance Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville’s PNW AC Intertie, maintenance Indirect Costs for Bonneville’s PNW AC Intertie, and maintenance Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Maintenance rate shall be calculated using the forecast Maintenance Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Maintenance Cost shall be calculated using the forecast Maintenance Cost less the Maintenance Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **C. General Plant**

The monthly charge equals:

$$\frac{\text{General Plant Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where



"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to General Plant Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the General Plant rate shall be calculated using the General Plant Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for General Plant Cost shall be calculated using the General Plant Cost less the General Plant Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **D. Other Costs**

The monthly charge equals:

$$\frac{\text{Other Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Other Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the Other Costs rate shall be calculated using the forecast Other Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Other Costs shall be calculated using the forecast Other Costs less the Other Costs already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **E. Contracts and Rates**

The monthly charge equals:

$$\frac{\text{Contracts and Rates Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Contracts and Rates Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Contracts and Rates Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville’s total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Contracts and Rates Cost is determined in accordance with section VI of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Contracts and Rates Cost determined in accordance with section VI of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Contracts and Rates rate shall be calculated using the forecast Contracts and Rates Costs in the Operating Plan in effect during the

month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Contracts and Rates Cost shall be calculated using the forecast Contracts and Rates Cost less the Contracts and Rates Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **F. Power Scheduling**

The monthly charge equals:

$$\frac{\text{Power Scheduling Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Power Scheduling Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Power Scheduling Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Power Scheduling Cost is determined in accordance with section VII of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Power Scheduling Cost determined in accordance with section VII of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Power Scheduling rate shall be calculated using the forecast Power Scheduling Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan

pertains, the monthly charge for Power Scheduling Cost shall be calculated using the forecast Power Scheduling Cost less the Power Scheduling Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **G. End of Term**

The monthly charge shall equals:

$$\frac{\text{End of Term Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to End of Term Costs, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“End of Term Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the End of Term rate shall be calculated using the forecast End of Term Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for End of Term Costs shall be calculated using the forecast End of Term Costs less the End of Term Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **H. Replacements and Reinforcements**

1. For each Replacement, the charge equals:

$$\text{Replacement Cost} * \text{Capacity Ownership Percentage}$$

2. For each Reinforcement, the charge equals:

$$\text{Reinforcement Cost} * \text{Capacity Ownership Percentage}$$

Where

"Replacement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Replacement Cost does not include capitalized general plant cost. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Reinforcement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Reinforcement Cost does not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The charge for the Replacements and Reinforcements rate shall use the actual Replacement Cost and Reinforcement Cost in the Operating Plan.

### **SECTION III. ADJUSTMENTS**

If an amendment to the Operating Plan results in a net amount that Bonneville owes the Capacity Owners pursuant to sections II.A-G or pursuant to section II.H, Bonneville shall refund such net amount pursuant to paragraph 9(f)(4) of the Agreement.

The monthly charges assessed Capacity Owners under sections II.A-G shall be adjusted, and payment or refund made with interest, pursuant to paragraphs 9(b)(2) or 9(f)(4) of the Agreement, to reflect amendments to the Operating Plan that occur after the year to which such Operating Plan pertains.

A Capacity Owner's share of the adjustment shall be determined using the same Capacity Ownership Percentage used in the billings under sections II.A-G during the fiscal year that such Operating Plan is effective.

B. BILLING PROVISIONS

I. General Provisions

A. Approval of Rates

The annual costs rate shall become effective upon interim approval or upon final confirmation and approval by FERC. Bonneville will request FERC approval of such rate schedule effective on the first day of a Bonneville fiscal year.

B. Application of Billing Provisions

These Billing Provisions shall apply to bills rendered by Bonneville pursuant to the annual costs rate.

C. Definition of Terms

The meaning of terms used in the AC-95 rate shall be as defined in the Agreement or, if no definition is provided by the Agreement, such terms shall be defined according to applicable Federal law.

II Billing Information

Payment of Bills

Charges pursuant to the AC-95 rate shall be included in Bonneville's monthly power bill to Capacity Owner. Failure to receive a power bill shall not release Capacity Owner from liability for payment. Power bills for amounts due of \$50,000 or more must be paid by direct wire transfer. If Capacity Owner anticipates special difficulties in meeting this requirement, Capacity Owner may request and Bonneville may approve an exemption from this requirement. Power bills for amounts due Bonneville under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by Bonneville. The procedures to be followed in making direct wire transfers will be provided by Bonneville's Financial Services Group and updated as necessary.

(1) Computation of Bills

(a) Bonneville shall bill Capacity Owner in accordance with the annual costs rate.

(b) Capacity Owner shall provide necessary information to Bonneville for any computation required to determine proper charges pursuant to the Agreement and shall cooperate with Bonneville in the exchange of additional information which may be reasonably useful for respective operations.

(c) Bills rendered pursuant to this Agreement shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents to 99 cents to the next higher whole dollar.

(2) Billing Month

For charges pursuant to the annual costs rate the billing month shall be the same as for the power bill rendered by Bonneville to Capacity Owner.

(3) Due Date

Charges pursuant to the annual costs rate shall be included in the power bill rendered by Bonneville to Capacity Owner and shall be due as part of the power bill when such power bill is due.

(4) Late Payment

The penalties for failure to pay a bill in full on or before close of business on the due date shall be the same as those contained in the late payment provisions in Bonneville's General Transmission Rate Schedule Provisions in effect on the date of the bill; provided, however, that no other provision of any such General Transmission Rate Schedule Provisions, including, but not limited to, provisions regarding cancellation, termination, or suspension of service, shall have application with respect to the payment of any rate or charge pursuant to the annual costs rate set forth in Exhibit B. Bonneville's right to suspend service for late payment under the Agreement shall be pursuant to paragraph 9(e)(1) of this Agreement, which right shall in no way be limited by this section.

(5) Disputed Bills

In the event of a disputed bill, full payment shall be rendered to Bonneville and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified in section II(4) of the Billing Provisions of this Exhibit B. Bonneville shall separately account for the disputed amount. If it is determined that Capacity Owner is entitled to the disputed amount, Bonneville shall refund the disputed amount with interest, such interest to



be determined by Bonneville's Financial Services Group. In the event that Bonneville and Capacity Owner do not resolve such dispute, Capacity Owner shall not be prevented by this section II(5) of the Billing Provisions of this Exhibit B from initiating arbitration pursuant to and to the extent allowed by section 15 of this Agreement.

(6) Revised Bills

If Bonneville determines that it has over- or under-charged Capacity Owner due to a computational error or pursuant to an amendment to the Operating Plan in any given billing month, Bonneville may render to Capacity Owner a revised bill.

(i) If the amount of the revised bill is less than or equal to the amount of the original bill for such billing month, the revised bill shall replace the original bill issued by Bonneville. The revised bill shall have the same date as the original bill.

(ii) If the amount of the revised bill is greater than the amount of the original bill for such billing month, a new bill will be issued for the difference between the revised bill and the original bill. The date of the new bill shall be its date of issuance, and Capacity Owner shall make payment to Bonneville as specified in the Billing Provisions of this Exhibit B.

**Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share**

Capacity Ownership Share = 41 MW

Capacity Ownership Percentage = Capacity Ownership Share ÷ Bonneville's PNW AC Intertie Rated Transfer Capability<sup>1</sup>

Scheduling Percentage = Capacity Ownership Share ÷ PNW AC Intertie Rated Transfer Capability

Scheduling Share = Scheduling Percentage × PNW AC Intertie Operational Transfer Capability

<sup>1/</sup> As of the Effective Date, Bonneville's PNW AC Intertie Rated Transfer Capability in a north-to-south direction, calculated in accordance with the Northwest Intertie Agreements equals 3450 MW (total PNW AC Intertie Rated Transfer Capability (4800 MW) – Portland's PNW AC Intertie Rated Transfer Capability (950 MW) – PacifiCorp's PNW AC Intertie Rated Transfer Capability (400 MW)).

**Lump Sum Payment Calculation**

A. SECOND 800 MW COSTS, ESTIMATED<sup>1</sup>, ACTUAL<sup>2</sup>, AND REVISED ACTUAL<sup>3</sup>

		(\$ in Thousands)		
		(1)	(2)	
<u>Facilities whose costs will be adjusted using change</u>	<u>Between Estimate and Actual</u>	<u>BPA's Costs</u>	<u>BPA's Costs</u>	<u>BPA's Costs</u>
		<u>Estimated</u>	<u>Actual</u>	<u>Revised Actual</u>
1.	Alvey (Marion-Alvey Caps)	\$5,739		
2.	Slatt (Loop in - Breaker)	3,044		
3.	Grizzly (BPA Breakers)	11,044		
4.	Loop into Slatt	656		
5.	Malin-Meridian loop into Captain Jack	982		
6.	Alvey Substation - BPA	8,168		
7.	Dixonville - PacifiCorp	8,635		
8.	Meridian - PacifiCorp	6,548		
9.	Power System Control	3,575		
10.	Alvey-Spencer - BPA	1,346		
11.	Spencer-Dixonville - PacifiCorp	20,388		
12.	Dixonville-Meridian - PacifiCorp	<u>32,140</u>		
	<b>SUBTOTAL</b>	<b>102,265</b>		
<u>Facilities whose costs will be adjusted using</u>				
<u>Change Between Estimate and Actual, multiplied</u>				
<u>by 50 percent</u>				
13.	Captain Jack (BPA Breakers)	\$14,335		
14.	Captain Jack (Communication and Control)	5,100		
15.	Captain Jack (Series Capacitors)	722		
16.	Power System Control	5,596		
17.	Captain Jack line to Oregon-Calif. border	<u>5,724</u>		
	<b>SUBTOTAL</b>	<b>\$31,477</b>		
	<b>50 PERCENT OF SUBTOTAL</b>	<b><u>15,739</u></b>		
	 <b>TOTAL</b>	 <b><u>\$118,004</u></b>		

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1/ Based on mid-1989 program planning levels.

2/ Actual costs will be available approximately December 1995, or as soon as practicable thereafter. Supporting documentation will be provided including work orders and accounting data for each line item.

3/ For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the revised actual costs of facilities pertaining to each such calculation of the Revised Adjusted Capacity Ownership Price.

**B. INITIAL, ADJUSTED, AND REVISED ADJUSTED CAPACITY OWNERSHIP PRICE<sup>1</sup>**

	(1)	(\$ in Millions) (2)	
<u>Cost Item</u>	Initial Capacity Ownership Price	Adjusted Capacity Ownership Price	Revised Adjusted Capacity Ownership Price <sup>2</sup>
1. Second 800 MW	\$118	\$___	\$___
2. AFUDC <sup>3</sup> on Second 800 MW	+ 19	+ ___	+ ___
3. Existing Support Facilities	+ <u>19.1</u>	+ <u>19.1<sup>4</sup></u>	+ <u>19.1<sup>4</sup></u>
4. Total Cost <sup>5</sup>	\$156	\$___	\$___
5. PRICE PER KW (CO-94) <sup>6</sup>	<u>\$215</u>	\$___	\$___

- 
- 1/ Initial, Adjusted, and Revised Adjusted Capacity Ownership Price are determined in accordance with the CO-94 rate in Exhibit A.
  - 2/ Bonneville may make multiple calculations of the Revised Adjusted Capacity Ownership Price pursuant to paragraph 9(a)(3). For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the column pertaining to such calculation and the columns for any previous calculations of the Revised Adjusted Capacity Ownership Price.
  - 3/ AFUDC will be calculated in accordance with the CO-94 rate in Exhibit A.
  - 4/ Not adjusted in calculating the Adjusted Capacity Ownership Price or the Revised Adjusted Capacity Ownership Price.
  - 5/ Bonneville's indirect costs and overhead costs shall be included. Such indirect costs and overhead costs shall be allocated or distributed to the Third AC Intertie Project using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Third AC Intertie Project was under construction. Such allocation or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's Third AC Intertie Project than with respect to any other transmission projects under construction at the same time.
  - 6/ Price per kW is derived by dividing the Total Cost by 725 MW.

C. INITIAL LUMP SUM PAYMENT

1.	Tacoma's Capacity Ownership Share	=	41 MW
2.	Initial Capacity Ownership Price	X	\$215 (\$215,000/MW)
3.	Initial Lump Sum Payment <sup>1</sup>	=	\$8,815,000
4.	Deduction: Negotiation Deposit with Interest <sup>2</sup>	-	0
5.	Due to Bonneville:	=	

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1/ Initial Lump Sum Payment is calculated in accordance with section IV.A of the CO-94 rate in Exhibit A.

2/ Tacoma submitted a letter of credit.

D. ADJUSTED LUMP SUM PAYMENT

1.	Tacoma's Capacity Ownership Share	=	41 MW
2.	Adjusted Capacity Ownership Price	X	\$
3.	Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Initial Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Tacoma	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Tacoma	=	

1/ Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A.

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from the date Bonneville receives payment pursuant to paragraph 9(a)(1) through the date Bonneville or Tacoma receives payment pursuant to subparagraph 9(a)(2)(B).

E. REVISED ADJUSTED LUMP SUM PAYMENT

1.	Tacoma's Capacity Ownership Share	=	41 MW
2.	Current Revised Adjusted Capacity Ownership Price	X	\$
3.	Current Revised Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Adjusted Lump Sum Payment/immediately preceding Revised Adjusted Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Tacoma	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Tacoma	=	

1/ Revised Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A. Bonneville will calculate a Revised Adjusted Lump Sum Payment each time a Revised Adjusted Capacity Ownership Price is calculated pursuant to paragraph 9(a)(3).

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from (a) the date Bonneville or Tacoma receives payment with respect to the Adjusted Lump Sum Payment pursuant to paragraph 9(a)(2)(B) or (b) the date Bonneville or Tacoma receives payment with respect to the Revised Adjusted Lump Sum Payment immediately preceding the current Revised Adjusted Lump Sum Payment through the date Bonneville or Tacoma receives payment with respect to the current Revised Adjusted Lump Sum Payment pursuant to subparagraph 9(a)(3)(B).

**Transmission Loss Factors**

- A. The transmission loss factor to be applied to Tacoma's schedules for transactions transmitted on Tacoma's Scheduling Share shall be 2.5 percent.
- B. The transmission loss factor to be applied to Tacoma's schedules for transactions transmitted pursuant to subparagraph 3(b)(1)(C) shall be 3.0 percent.



**Bonneville's PNW AC Intertie**

**A. TRANSMISSION LINE FACILITIES**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>McNary-John Day 500 kV Line Loop into Slatt:</u>	100	100
• McNary-Slatt Str. 108/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. 1/1 to substation dead end tower, 194 meters		
2. John Day-Grizzly No. 1 500 kV	100	100
3. John Day-Grizzly No. 2 500 kV	100	100
4. Grizzly-Captain Jack No. 1 500 kV	100	100
5. Captain Jack-Malin No. 1 500 kV	100	100
6. Buckley-Grizzly 500 kV	100	57
7. Grizzly-Summer Lake 500 kV	100	57
8. 500 kV double circuit between Buckley and Marion that supports the Buckley- Marion No. 1 and the Ashe-Marion No. 2 500 kV circuits (Str. No. 1/3 to Marion, 159 km)	100	25
9. Marion-Alvey 500 kV	100	50
10. Captain Jack-COB (10 km) 500 kV	100	100
11. Alvey-Dixonville 500 kV	50	100
12. Dixonville-Meridian 500 kV	50	100

**B. SUBSTATION FACILITIES 1/2/**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <b>Slatt 500 kV</b> (Dispatch one-line diagram No. 228962)		
<u>John Day line terminal</u>		
• New Breaker D#5021	100	100
• Existing 500 kV MOD D#5020/7022	100	100
• New 500 kV MOD D#5022	100	100
• Existing 500 kV MOD D#5019	100	50
• Existing Breaker D#5018	100	50

**% APPLICABLE TO**  
**% BPA OWNED PNW AC INTERTIE**

	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>McNary line terminal</u>		
	• 500 kV MOD D#5023/7847	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	Station General		
2.	<b>John Day 500 kV (Dispatch one-line diagram No. 132281)</b>		
	<u>Grizzly No.2 line terminal</u>		
	• Breaker D#4131	100	50
	• Breaker D#4134	100	100
	• MOD D#4132	100	50
	• MOD D#4133/7867	100	100
	• MOD D#4135	100	100
	• Associated Line PTs	100	100
	<u>Grizzly No.1 line terminal</u>		
	• Breaker D#4140	100	50
	• Breaker D#4143	100	100
	• MOD D#4141	100	50
	• MOD D#4142/7869	100	100
	• MOD D#4144	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	Station General		
3.	<b>Buckley 500 kV, Gas Insulated Substation (Dispatch one-line diagram No. 232583)</b>		
	<u>Slatt No. 1 line terminal</u>		
	• Breaker D#4967	100	57
	• Isolating switch D#4966/7328	100	57
	• Isolating switch D#4968/7355	100	57
	• Ground switch D#7415	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Summer Lake No. 1 line terminal</u>		
	• Breaker D#4961	100	57

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% BPA OWNED PNW AC INTERTIE

	• Isolating switch D#4960/7312	100	57
	• Isolating switch D#4962/7313	100	57
	• Ground switch D#7311	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Marion No. 1 line terminal</u>		
	• Breaker D#4964	100	57
	• Isolating switch D#4963/7314	100	57
	• Isolating switch D#4965/7321	100	57
	• Ground switch D#7477	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	Station General		
4.	<b>Marion 500 kV</b> (Dispatch one-line diagram No. 136180)		
	<u>Buckley line terminal</u>		
	• Breaker D#4389	100	50
	• Breaker D#4386	100	25
	• MOD D#4387	100	25
	• MOD D#4390	100	50
	• MOD D#4388/7751	100	50
	• Associated Line PTs	100	50
	<u>Alvey line terminal</u>		
	• Breaker D#4374	100	50
	• Breaker D#4377	100	25
	• MOD D#4376	100	25
	• MOD D#4375/7922	100	50
	• MOD D#4373	100	50
	• Associated Line PTs	100	50
	Station General		
5.	<b>Alvey 500 kV</b> (Dispatch one-line diagram No. 121424)		
	<u>Bank No. 5 terminal</u>		
	• Breaker D#5081	50	100
	• MOD D#5080	50	100
	• MOD D#5082	50	100
	• MOD D#5090	50	100

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• MOD D#5089/8157	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 line terminal</u>		
• Breaker D#5084	50	100
• MOD D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 line terminal</u>		
• Breaker D#5087	50	100
• MOD D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV line)</u>		
• MODs D#5100/8160,5101/8159, 5102/8158	50	100
• Bypass breaker D#5103	50	100

6. **BPA/PacifiCorp Dixonville 500 kV Station** (PacifiCorp's one-line diagram PD-40020)

Note: PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299, as revised or amended.

For Alvey and Meridian line terminals

• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of line terminal PTs	50	100
• Two sets of line terminal arresters	50	100

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<ul style="list-style-type: none"> <li>• Series Capacitor Bank in Alvey-Dixonville 500 kV line and associated isolating devices</li> <li>• 180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices</li> </ul>	<p>50</p> <p>50</p>	<p>100</p> <p>100</p>
<p>Station General</p>		
<p>7. <b>BPA/PacifiCorp Meridian 500 kV Yard</b> (PacifiCorp's one-line diagram PD-32976)</p>		
<p><b>Note:</b> PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299.</p>		
<p><u>For Dixonville line terminal</u></p>		
<ul style="list-style-type: none"> <li>• Breakers 11R2, 11R6</li> <li>• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711</li> <li>• One set of line PTs</li> <li>• One set of line terminal arresters for the Dixonville line and one set for the Captain Jack line</li> <li>• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices</li> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV line and associated isolating devices.</li> </ul>	<p>50</p> <p>100</p> <p>50</p> <p>50</p> <p>50</p> <p>50</p>	<p>50</p> <p>100</p> <p>100</p> <p>100</p> <p>100</p> <p>100</p>
<p>Station General</p>		
<p>8. <b>Grizzly 500 kV</b> (Dispatch one-line diagram No. 103924)</p>		
<p><u>John Day No. 1 line terminal</u></p>		
<ul style="list-style-type: none"> <li>• Breaker D#4058</li> <li>• Breaker D#5040</li> <li>• MOD D#4059</li> <li>• MOD D#4057/7848</li> </ul>	<p>100</p> <p>100</p> <p>100</p> <p>100</p>	<p>100</p> <p>100</p> <p>100</p> <p>100</p>

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• MOD D#4056	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 line terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 line terminal</u>		
• Breaker D#5031	100	100
• Breaker D#5028	100	100
• MOD D#5032	100	100
• MOD D#5030/8122	100	100
• MOD D#5029	100	100
• MOD D#5027	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#5037	100	100
• Breaker D#5034	100	100
• MOD D#5038	100	100
• MOD D#5036/8123	100	100
• MOD D#5035	100	100
• MOD D#5033	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake line terminal</u>		
• Breaker D#5025	100	100
• MOD D#5026/8121	100	100
• MOD D#5024	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100

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	<u>180 MVAR Reactor Bank No. 1</u>	100	100
	• Breaker D#4222	100	100
	• Isolating Switch D#4060	100	100
	• Associated Arresters	100	100
	<u>300 MVAR Reactor Bank No. 2</u>	100	100
	• Breaker D#4720	100	100
	• Isolating Switch D#4719	100	100
	• Associated Arresters	100	100
	• 300 MVAR Reactor Bank No. 3 and Neutral Reactor	100	100
	• Breaker D#4038	100	100
	• Isolating Switch D#4062	100	100
	• Neutral isolating switch D#4109/4081	100	100
	• Associated Arresters	100	100
	• Associated PTs	100	100
	• North Main Bus 500 kV PTs	100	100
	• South Main Bus 500 kV PTs	100	100
	Station General		
9.	<b>Sand Spring 500 kV Compensation Station</b> (Dispatch one- line diagram No. 142239)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
10.	<b>Fort Rock 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142237)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
11.	<b>Sycan 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142238)		

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	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Summer Lake-Malin line) and associated equipment but <b>excluding</b> the bypass MOD D#5065 and transmission tower	65	100
	Station General		
12.	<b>Summer Lake 500 kV</b> (Dispatch one-line diagram No. 232667)		
	<u>Grizzly line terminal</u> (formerly Buckley-Ponderosa Tap)		
	• Breaker D#4959	100	57
	• MOD D#4955	100	57
	• MOD D#4956/7309	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Malin line terminal</u>		
	• Line protective relays	0	100
	Station General		
13.	<b>Malin 500 kV</b> (Dispatch one-line diagram No. 103923)		
	<u>Captain Jack No. 1 line terminal</u>		
	• Breaker D#4066	100	100
	• Breaker D#4064	100	100
	• MOD D#4068	100	100
	• MOD D#4067/7849	100	100
	• MOD D#4065	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 1 terminal</u>		
	• Breaker D#4186	50	100
	• MOD D#4063/7970	100	100
	• MOD D#4185	50	100
	• MOD D#4187	50	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 2 terminal</u>		



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• Breaker D#4582	50	100
• MOD D#4583	50	100
• MOD D#4581	50	100
• MOD D#4074/7856	75	100
<u>Grizzly No. 2/Round Mountain No. 2 line position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
<u>North Main Bus 500 kV PTs</u>	100	100
<u>South Main Bus 500 kV PTs</u>	50	100
<u>300 MVAR Shunt Reactor Bank No. 1 and associated arresters and isolating devices (D#4327, 4393)</u>	100	100
<u>2-239 MVAR Shunt Cap. Banks and associated isolating devices (D#4183, 4181, 4184, 4182, 8065, 8066)</u>	100	100
<u>Line protective relays for Summer Lake line</u>	0	100
Station General		
14. <b>Captain Jack 500 kV</b> (Dispatch one-line diagram No. 248548)		
<u>Series Cap. Bank No. 1</u> (Captain Jack-Olinda line)	100	100
• MODs D#4974/8101, 4973/8099, 4975/8100	100	100
• Bypass breaker D#4971, 4972		
<u>Grizzly No. 1 line terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD D#4991/8104	100	100
• MOD D#4992	100	100
• MOD D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 line terminal</u>		
• Breaker D#4996	100	100

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• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Olinda No. 1 line terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
<u>North Main Bus 500 kV PTs</u>	100	100
South Main Bus 500 kV PTs	100	100
Station General		
<b>15. Chief Joseph Substation (Dispatch one-line diagram No. 124313)</b>		
<u>230 kV, 1400 MW Braking Resistor</u>	100	100
Includes breaker dispatch No. A-594, a high speed vacuum switch and one 230 kV isolating switch in Bay 12		
Station General		

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 1/ Station General will be allocated to each substation according to Bonneville's standard methodology.

2/ Each substation includes associated relays.

**Capacity Owners**

<b>CAPACITY OWNER</b>	<b>CONTRACT NUMBER</b>	<b>CAPACITY OWNERSHIP SHARE (MW)</b>	<b>CAPACITY OWNERSHIP PERCENTAGE</b>
PNGC	DE-MS79-94BP94523	50	1.4
Puget	DE-MS79-94BP94521	400	11.6
Seattle	DE-MS79-94BP94522	160	4.6
Snohomish	DE-MS79-94BP94525	42	1.2
Tacoma	DE-MS79-94BP94524	41	1.1

PNGC: Pacific Northwest Generating Cooperative

Puget: Puget Sound Power & Light Company

Seattle: City of Seattle, City Light Department

Snohomish: Public Utility District No. 1 of Snohomish County

Tacoma: Tacoma Public Utilities

**Provisions Required by Statute or Executive Order**

1. Contract Work Hours and Safety Standards Act (40 U.S.C. & 327, et seq.).

(a) Overtime Requirements.

Tacoma, contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation: liability for unpaid wages; liquidated damages.

In the event of any violation of the provisions set forth in section 1 of this Exhibit H, Tacoma and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, Tacoma and such subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in section 1 of this Agreement in the sum of \$10.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provision set forth in section 1 of this Exhibit.

(c) Withholding for unpaid wages and liquidated damages.

The person designated in writing by Bonneville's Administrator with the Authority to enter into, administer, modify, suspend or terminate this Exhibit, make related determinations and findings and bind Bonneville only to the extent of delegated authority shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Tacoma or its subcontractor, if any, under any such

contract or any other federal contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of Tacoma or such subcontractor for unpaid wages and liquidated damages as provided in section 2 of this Exhibit.

2. Convict Labor (Exec. Order No. 11755, Dec. 29, 1979).

In connection with the performance or work under this Agreement, Tacoma and any subcontractor, if any agrees not to employ any person undergoing sentence of imprisonment except as otherwise provided by law.

3. Equal Opportunity (Exec. Order No. 11246, Sep. 24, 1965).

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), Tacoma has been or is awarded nonexempt federal contracts and/or subcontracts that have an aggregate value in excess of \$25,000.00, Tacoma shall comply with sections 3(b)(1) through 3(b)(11) below. Upon request, Tacoma shall provide information necessary to determine the applicability of this clause.

(b) During performance of this Agreement, Tacoma agrees as follows:

(1) Tacoma shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

(2) Tacoma shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: (1) employment; (2) upgrading; (3) demotion; (4) transfer; (5) recruitment or recruitment advertising; (6) layoff or termination; (7) rates of pay or other forms of compensation; and (8) selection for training, including apprenticeship.

(3) Tacoma shall post in conspicuous places, available to employees and applicants for employment, the notices that explain this clause, such notices to be provided by the person designated in writing by Bonneville's Administrator with the authority to enter into, administer, modify, suspend or terminate this Agreement, make related determinations and findings and bind Bonneville only to the extent of delegated authority (Contracting Officer).

(4) Tacoma shall, in all solicitations or advertisements for employees placed by or on behalf of Tacoma, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(5) Tacoma shall send, to each labor union or representative or of workers with which it has a collective bargaining agreement or other contract or understanding, the notice provided by the Contracting Officer advising the labor union or workers' representative of Tacoma's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) Tacoma shall comply with Executive Order No. 11246, Sep. 24, 1965 (30 Fed. Reg. 12319), as amended, and the rules, regulations and orders of the Secretary of Labor.

(7) Tacoma shall furnish to Bonneville all information required by Executive Order No. 11246, as amended, and by the rules, regulations and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award of this contract, unless filed within 12 months preceding the date of the award of this contract.

(8) Tacoma shall permit access to its books, records and accounts by Bonneville or the Office of Federal Contract Compliance Programs (OFCCP) for purpose of investigation to ascertain Tacoma's compliance with such rules, regulations and orders.

(9) If the OFCCP determines that Tacoma is not in compliance with this clause or any rule, regulation or order of the Secretary of Labor, this Agreement may be canceled, terminated, or suspended in whole or in part and Tacoma may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order No. 11246, as amended. In addition, sanctions may be imposed and remedies invoked against Tacoma as provided in Executive Order No. 11246, as amended, the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10) Tacoma shall include the terms and conditions of sections 3(b)(1) through 3(b)(11) of this Exhibit in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) Tacoma shall take such action with respect to any subcontract or purchase order as may direct as means of enforcing these terms and conditions, including sanctions for noncompliance: Provided, that if Tacoma becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, Tacoma may request the Government to enter into the litigation to protect the interest of the United States.

(c) Notwithstanding any other clause in this Agreement, disputes relative to this clause will be governed by the procedures in 41 CFR § 66-1.1.

4. Certification of Non-segregated Facilities (48 CFR § 22.810).

(a) Tacoma certifies that it does not and will not maintain or provide for employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. Tacoma agrees that a breach of this certification is a violation of section 3 (the Equal Opportunities Clause) of this Exhibit.

(b) Tacoma agrees that it will (1) obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; (2) retain such certifications in its files (3) forward the following notice to such proposed subcontractors, except where the proposed subcontractors have submitted identical certifications of specific time periods:

"Notice to Prospective Subcontractors of Requirement for  
Certifications of Non-segregated Facilities.

"A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. This certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually)."

5. Officials Not to Benefit (41 U.S.C. § 22).

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement or to any benefit arising from it. However, this clause does not apply to this Agreement to the extent that this Agreement is made with a corporation for the corporation's general benefit.

6. Bonneville's Obligations Not General Obligations of the United States (16 U.S.C. § 839(j)).



None of the offerings of obligations, or promotional materials for such obligations, which may be offered by Tacoma to fund its activities pursuant to this Agreement, shall be construed to be, general obligations of the United States, nor are such obligations intended to be or are they secured by the full faith and credit of the United States.

7. Small Business Act (15 U.S.C. §§ 631 and 637).

(a) It is the policy of the Government that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any federal agency.

(b) Tacoma hereby agrees to carry out the policy set forth in 7(a) in awarding subcontracts to the fullest extent consistent with the efficient performance of this Agreement. Tacoma further agrees to cooperate on any studies or surveys as may be conducted by the United States Small Business Administration or Bonneville as may be necessary to determine the extent of Tacoma's compliance with this clause.

(c) As used in this agreement the term "small business concern" shall mean a small business as defined in section 3 of Small Business Act (15 U.S.C. § 632) and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

- (1) which is at least 51 percent owned by one or more socially disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

- (2) whose management and daily business operations are controlled by one or more such individuals.

Tacoma shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans and other minorities, or any other individual found to be disadvantaged by the United States Small Business Administration pursuant to section 8(a) of the Small Business Act.

- (d) Tacoma acting in good faith may rely on written representations by its subcontractor regarding its status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

8. Other Statutes, Executive Orders and Regulations.

- (a) Tacoma agrees to comply with the following statutes, executive orders and regulations to the extent applicable:

- (1) False Claims Act, 31 U.S.C. § 3729, et seq. Whoever makes or presents to any person or officer in the civil military or naval service of the United States, or to any department or agency thereof, any claim upon or against the United States, or any department or agency thereof, knowing such claim to be false, fictitious or fraudulent, shall be fined not more than \$10,000.00 or imprisoned not more than 5 years, or both;

- (2) Rehabilitation Act of 1973, 29 U.S.C. §793, as amended, Executive Order No. 11758, Jan. 15, 1974, and the regulations of the Secretary of Labor, 41 CFR Part 60-250, et seq., which concern affirmative action for handicapped workers;

(3) Vietnam Era Veterans Readjustment Assistance Act of 1972, 38 U.S.C. §§ 101, 102, 240, 241, 1502, 1504, 1507, as amended, and the clauses contained in 41 CFR Part 60-250, et seq., which concern affirmative action for disabled veterans and veterans of the Vietnam Era;

(4) Executive Order No. 11625, Oct. 13, 1971, and implementing regulations which concern utilization of small disadvantaged business concerns;

(5) Anti-Kickback Act, 41 U.S.C. § 51, et seq.; and

(6) Privacy Act of 1974, 5 U.S.C. § 552a.

(b) Tacoma agrees to comply with requirements deemed necessary by Bonneville in order to implement Bonneville's obligations under the National Historic Preservation Act of 1966, U.S.C. §§ 470, et seq.

### **Bonneville's PNW AC Intertie Costs**

All costs in sections I through VIII of this Exhibit I shall be subject to the following provisions:

#### **PURPOSE**

Bonneville shall determine and calculate Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs with respect to Bonneville's PNW AC Intertie in accordance with this Exhibit I. None of Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, and End of Term Costs (each of the foregoing for purposes of this sentence, a Cost) shall include any other Cost.

#### **SOURCE OF INFORMATION AND COSTS**

Bonneville shall forecast in accordance with this Exhibit I the costs reflected in any Operating Plan pursuant to Schedules A through H of this Exhibit using the most detailed information available to Bonneville from its budget process at the time the forecast is made. Bonneville shall determine the actual costs reflected in any Operating Plan pursuant to Schedules A through H, using Bonneville's then existing accounting system in accordance with this Exhibit I. All costs reflected in Schedules A through H shall be net of credit.

Bonneville shall determine its overall overhead and overall indirect costs. A portion of Bonneville's overall overhead and indirect costs shall be allocated to such total system operations costs (pursuant to section I below), total system maintenance costs (pursuant to section II below), total capital costs (pursuant to sections III and IV below), Other Costs (pursuant to section V below), Contracts and Rates Costs (pursuant to section VI below), Power Scheduling Costs (pursuant to section VII below), and End of Term Costs (pursuant to section VIII below) using Bonneville's

normal allocation or distribution methodologies for such costs, as such methodologies may be changed by Bonneville from time to time. Such allocations or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's PNW AC Intertie than with respect to other transmission facilities.

Bonneville shall record its costs into its accounting systems in accordance with generally accepted accounting principles. For purposes of this Agreement, "generally accepted accounting principles" means the common set of accounting concepts, standards, and procedures that are adopted by entities (such as the utility industry) for purposes of financial statement disclosure.

Whenever Bonneville alters its accounting system or methods to permit costs referred to in this Exhibit I, which were previously allocated to functions and activities, to be directly assigned to function and activities, then in that event Tacoma and Bonneville shall, in concert with the Capacity Owners other than Tacoma, in good faith negotiate revisions to this Exhibit I to include such directly assigned costs.

## **COSTS**

### **I. Operations Costs**

#### **A. Operations Costs - Allocation Factor**

The allocation factor (Schedule A, line 3) used to determine the Allocated Direct Cost of Operations Cost, Indirect Cost of Operations Cost, and Overhead Cost of Operations Cost is the ratio of major facility units (MFUs) of Bonneville's PNW AC Intertie operated by Bonneville to MFUs of the Federal Columbia River Transmission System.

An MFU (Schedule A, lines 1 and 2) is any of the following major pieces of power system equipment which, at any given time, is installed on and is a part of the Federal Columbia River Transmission System: substation switchgear (such as power circuit breakers; potential devices; disconnects, load interrupters, hot-stick operated bus links; switching devices, circuit switchers, ground switches; and switchyard equipment terminals); protective

equipment (such as grounding devices; reactors; arrestors and resistors; voltage regulators; engine generators and motor generators; and high voltage fuses); transformation equipment (such as power transformers; diesel generators; grounding transformers; regulators and shunt reactors; synchronous condensers; and shunt or series capacitors); station equipment (such as switchyard lighting, batteries and chargers, air compressors, station service equipment, and lightning arrestors); instruments, control, and supervisory equipment (such as switchboards, instruments, and control panels; relay panels, transfer trip, and single-pole relaying; and oscillographs; fault detectors and locators; sequential events recorders, supervisory control, and data acquisition equipment; and indicating meters, instruments, and loggers); and equipment specific to direct current and static var compensator stations (such as mercury arc valves; thyristor systems; air handling packages; water control packages; harmonic filtering systems; motor control centers, such as fans, pumps, and dampening resistors; and valve damping resistors); or devices that perform similar types of functions.

Once each fiscal year, Bonneville shall count the number of MFUs on Bonneville's PNW AC Intertie (exclusive of facilities operated by others) (Schedule A, line 1) and the number of MFUs on the Federal Columbia River Transmission System (Schedule A, line 2). In calculating the forecast Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs, Bonneville shall use the most recent MFU count available at the time of such calculation in developing its initial Operating Plan for a given fiscal year. For each Operating Plan which is for the same fiscal year, Bonneville shall use the same MFU count in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**B. Operations Costs - Operations Functionalization Factor**

For each Operating Plan, Bonneville's total system operations direct cost, indirect cost and overhead cost (Schedule A, lines 7, 9, and 11) shall be adjusted by an operations functionalization factor (Schedule A, line 6) so that

Capacity Owners pay only transmission-related system operations costs. The operations functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using the costs developed for the last year of the rate period for which Bonneville has developed rates, the operations functionalization factor shall be the ratio of (a) Bonneville's total system operations cost functionalized to transmission (Schedule A, line 4) over (b) Bonneville's total system operations cost (Schedule A, line 5). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**C. Operations Costs - Allocated Direct Costs**

For each Operating Plan, Bonneville shall allocate its total system operations direct costs as set forth in Schedule A, lines 7 and 8, to determine Allocated Direct Costs of Operations Cost (Schedule A, line 8).

Schedule A, line 7, shall reflect Bonneville's total system operations direct costs for a fiscal year. Bonneville's total system operations direct costs for a fiscal year shall include all system operations expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: substation operations (which provides for, among other things, making equipment adjustments to maintain loads and voltages within acceptable limits, switching to deenergize lines and equipment during maintenance outages, isolating damaged equipment, restoring service to customers, visually inspecting equipment, and reading meters that record line and equipment loading and voltages), power system control and dispatching (which provides for, among other things, central dispatching, control, and monitoring of the electric operation

of the Federal transmission system; load, frequency, and voltage control of Federal generating plants; the operating of the system control and data computers at the Dittmer and Eastern Control Centers; and modification and maintenance of the operation-related computers), and operations standards and engineering (which provides for, among other things, analyzing system loads, voltage levels, outage information, stability levels, and other data; making policy recommendations for system operations; planning operations' practices, restoration plans and disturbance ports; development of control center requirements for centralized automation of substations and generation; and Bonneville's participation with other utilities in developing utility operating standards and guides); and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 8, shall reflect Allocated Direct Cost of Operations Cost.

**D. Operations Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system operations indirect costs as set forth in Schedule A, lines 9 and 10, to determine Indirect Costs of Operations Costs.

Schedule A, line 9, shall reflect Bonneville's total system operations indirect costs for a fiscal year. Bonneville's total system operations indirect costs for a fiscal year shall include all system operations indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: general supervision and management, office support, planning, budgeting, training, direction of facilities' operation, and other system operations activities undertaken by Bonneville that are



consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 10, shall reflect Indirect Cost of Operations Cost.

**E. Operations Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system operations overhead costs as set forth in Schedule A, lines 11 and 12, to determine Overhead Costs of Operations Costs.

Schedule A, line 11, shall reflect Bonneville's total system operations overhead costs for a fiscal year. Bonneville's total system operations overhead costs for a fiscal year shall include all system operations overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system operations overhead activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule A, line 12, shall reflect Overhead Cost of Operations Cost.

Schedule A, line 13, shall reflect Operations Cost.

## **II. Maintenance Costs**

### **A. Maintenance Costs - Power System Control Maintenance Functionalization Factor**

For each Operating Plan, the Power System Control (PSC) maintenance cost (Schedule B, line 4) shall be adjusted by a PSC maintenance functionalization factor (Schedule B, line 3). PSC maintenance is the testing, repair, and engineering support for Bonneville's communications and control systems. The PSC maintenance functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs for the last year of the rate period for which Bonneville has developed rates, the PSC functionalization factor shall be the ratio of (a) Bonneville's total PSC maintenance cost functionalized to transmission from such general rate case (Schedule B, line 1) over (b) Bonneville's total PSC maintenance cost from such general rate case (Schedule B, line 2).

### **B. Maintenance Costs - Direct Costs**

The Direct Costs of Maintenance Costs for a fiscal year (Schedule B, line 7) shall be Bonneville's direct costs of maintaining Bonneville's PNW AC Intertie and shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities for maintenance of Bonneville's PNW AC Intertie: transmission line maintenance; substation maintenance; power system control

maintenance; nonelectric plant maintenance; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of Bonneville's PNW AC Intertie undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

With the exception of PSC maintenance costs, Bonneville shall specifically identify the direct costs of maintaining Bonneville's PNW AC Intertie (Schedule B, line 7). To determine PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6), the total PSC direct maintenance cost (Schedule B, line 4) shall be multiplied by (a) the PSC maintenance functionalization factor (Schedule B, line 3) and (b) the MFU allocation factor (Schedule B, line 5) set forth in Schedule A, line 3. The Direct Costs of Maintenance Costs (Schedule B, line 8) shall be the sum of (a) PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6) and (b) the direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost (Schedule B, line 7).

**C. Maintenance Costs - Allocation Factor**

The allocation factor (Schedule B, line 10) used to determine Indirect Cost of Maintenance Cost and Overhead Cost of Maintenance Cost shall be the ratio of the Direct Cost of Maintenance Cost (Schedule B, line 8) to Bonneville's total system maintenance direct cost (Schedule B, line 9), as described below.

Schedule B, line 9, shall reflect Bonneville's total system maintenance direct costs for a fiscal year. Bonneville's total system maintenance direct costs for a fiscal year shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred

by Bonneville in connection with the performance of any of the following activities: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; establishing, monitoring, and updating system maintenance standards, policies, and procedures; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of the Federal Columbia River Transmission System undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 10, shall reflect the percentage which shall be used to allocate Bonneville's total system maintenance indirect cost and total system maintenance overhead cost to Bonneville's PNW AC Intertie.

**D. Maintenance Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance indirect costs as set forth in Schedule B, lines 11 and 12, to determine Indirect Costs of Maintenance Costs.

Schedule B, line 11, shall reflect Bonneville's total system maintenance indirect costs for a fiscal year. Bonneville's total system maintenance indirect costs for a fiscal year shall include all system maintenance indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance any of the following activities: supervision and management, office support, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other system maintenance activities

undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 12, shall reflect Indirect Cost of Maintenance Cost.

**E. Maintenance Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance overhead costs as set forth in Schedule B, lines 13 and 14, to determine Overhead Costs of Maintenance Costs.

Schedule B, line 13, shall reflect Bonneville's total system maintenance overhead costs for a fiscal year. Bonneville's total system maintenance overhead costs for a fiscal year shall include all system maintenance overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system maintenance overhead activities undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule B, line 14, shall reflect Overhead Cost of Maintenance Cost.

Schedule B, line 15, shall reflect Maintenance Cost.

**III. Replacement Costs and Reinforcement Costs**

**A. Replacement Costs and Reinforcement Costs - Direct Costs**

The Direct Costs for Replacements and Reinforcements for a fiscal year (Schedule C, line 1) shall be Bonneville's direct capital costs for Replacements and Reinforcements for such fiscal year and shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, land, materials and equipment, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of the following activities: planning, environmental analyses and mitigation, survey, design, land, materials and equipment, turnkey contracts, contract construction, force account construction, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council. The Direct Costs for any Replacement or Reinforcement for a fiscal year shall also include the costs of removal and any salvage credits with respect to any PNW AC Intertie facility removed on account of such Replacement or Reinforcement.

**B. Replacement Costs and Reinforcement Costs - Indirect Costs and Overhead Costs**

For each Replacement and Reinforcement project, the Indirect Costs and Overhead Costs for Replacements and Reinforcements (Schedule C, line 2) shall be allocated or distributed to such Replacements and Reinforcements using the indirect and overhead allocation and distribution methodologies

employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Replacements and Reinforcements are under construction. Schedule C, line 2, shall reflect the Indirect Costs and Overhead Costs of Replacements and Reinforcements.

Indirect Costs of Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel expenses, service contracts, consulting contracts, administration of materials, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: supervision, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Overhead Costs for Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other costs, each of which being which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services;

area offices; operations, maintenance, and construction; and engineering); and (c) other replacement and reinforcement activities undertaken by Bonneville that are consistent with replacement and reinforcement activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

**C. Replacement Costs and Reinforcement Costs - Allowance for Funds Used During Construction (AFUDC)**

Schedule C, line 3, shall reflect AFUDC for Replacements and Reinforcements. At the beginning of each fiscal year, Bonneville shall calculate the AFUDC rate for such fiscal year. Bonneville shall apply such AFUDC rate monthly to the costs in accounts for construction work in progress for Replacements and Reinforcements.

**D. Replacement Costs and Reinforcement Costs - Interest**

Schedule C, line 4, shall reflect the interest cost payable by Tacoma pursuant to this Agreement with respect to any Replacement or Reinforcement. Such interest cost for any Replacement or any Reinforcement shall be simple interest calculated at a rate equal to the weighted average interest rate on Bonneville's then outstanding bonds or other debt instruments and such interest shall accrue from the date Bonneville stops accruing AFUDC (approximately the date the work order for such Replacement or such Reinforcement is closed) with respect to such Replacement or such Reinforcement to the due date of the monthly power bill containing the charge for such Replacement or such Reinforcement.

**IV. General Plant Costs**

For each Operating Plan, Bonneville shall adjust, amortize, and allocate Bonneville's total general plant investment (as described below) and Bonneville's Dittmer control equipment investment as set forth in Schedule D, lines 1 through 11, to determine General Plant Cost.



Schedule D, line 1, shall reflect for a fiscal year Bonneville's total cumulative general plant investment. Bonneville's total general plant investment shall include Bonneville's investments in any of the following: land-general plant, structures/improvements-general plant, office furniture and equipment, transportation equipment, stores equipment, tools/shop/garage equipment, laboratory equipment, power operated equipment, communication equipment, miscellaneous equipment (including equipment or apparatus used in Bonneville's utility operations which are not includable in any other general plant investment category), and other similar investment made by Bonneville that is consistent with general plant investment made by utilities in the Western Systems Coordinating Council.

Schedule D, line 2, shall reflect for a fiscal year Bonneville's cumulative investment in Dittmer control equipment.

Schedule D, line 3, shall reflect Bonneville's total general plant investment and Bonneville's Dittmer control equipment investment functionalized to generation using the methodology for functionalizing general plant as set forth in Bonneville's general rate case most recently approved by FERC on an interim basis.

Schedule D, line 4, shall reflect any general plant investment recovered from all Capacity Owners under the CO-94 rate as such general plant investment is unitized by Bonneville; provided, however, for the first two Operating Plans Bonneville shall estimate the amount of the general plant investment included in the Initial Capacity Ownership Price, which estimate shall be reflected in Schedule D, line 4, and Bonneville shall modify such Operating Plans by December 1995, or as soon as practicable thereafter, to reflect in Schedule D, line 4, the actual general plant investment included in the Adjusted Capacity Ownership Price.

Schedule D, line 5, shall reflect any general plant investment recovered from Capacity Owners pursuant to section 5 for Upgrades. The agreements

referred to in subsection 5(d) and subparagraph 5(e)(3)(B) shall specify the portion of costs of an Upgrade that will be considered general plant investment.

Schedule D, line 6, shall reflect Bonneville's adjusted general plant investment functionalized to transmission and shall be calculated by adding line 1 and line 2, and from the sum of line 1 and line 2 subtracting line 3, line 4, and line 5.

Schedule D, line 7, shall reflect Bonneville's annual cost of Bonneville's adjusted general plant investment functionalized to transmission (Schedule D, line 6). Such annual cost shall be the sum of the annual interest and amortization amounts for each category of adjusted general plant investment. The annual interest and amortization amounts for each category shall be calculated by using the investment amounts for each such category, the weighted average interest rate for all Bonneville then outstanding bonds, and the average service lives for each such category from Bonneville's most recent depreciation study. If Bonneville changes its practice of financing general plant investment with bonds, the interest rate used in the calculation referred to in the immediately preceding sentence shall reflect the weighted average interest rate for all of Bonneville's then outstanding debt instruments.

Schedule D, line 8, shall reflect for a fiscal year Bonneville's total cumulative transmission plant-in-service investment (not including general plant investment). Bonneville's total transmission plant-in-service investment shall include Bonneville's investment in any of the following items reflected as total transmission plant-in-service (not including general plant investment) in the Segmentation Study (from Bonneville's general rate case most recently approved by FERC on an interim basis: land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant

investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

Schedule D, line 9, shall be the annual cost ratio of Bonneville's PNW AC Intertie transmission-related general plant derived by dividing Schedule D, line 7, by Schedule D, line 8.

Schedule D, line 10, shall reflect Bonneville's PNW AC Intertie investment. Bonneville's PNW AC Intertie investment shall include Bonneville's investment in any of the following items reflected as Bonneville's PNW AC Intertie plant-in-service in the Segmentation Study from Bonneville's general rate case most recently approved by FERC on an interim basis (or the successor to the Segmentation Study, as determined by Bonneville): land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

**V. Other Costs**

For each Operating Plan, Bonneville shall include Other Costs associated with Bonneville's PNW AC Intertie for a fiscal year. Such Other Costs (Schedule E, line 3) for a fiscal year shall include for such fiscal year any of the following: (1) the costs of operation; maintenance; capital replacements, reinforcements, additions, betterments, renewals; or related costs which Bonneville is obligated to pay pursuant to the Northwest Intertie Agreements or other contracts referred to in subsection 8(b) of this Agreement; and (2) costs paid by Bonneville including monetary judgments, settlements, binding awards, non-contract penalties, contract penalties, liquidated damages, or forfeiture costs, and Bonneville's costs related to such monetary judgments, settlements, binding awards, non-contract penalties, contract penalties,

liquidated damages, or forfeiture costs assessed against or incurred by Bonneville as a facilities owner of, or the operator of, the PNW AC Intertie; provided, however, that Tacoma shall not be obligated to pay a share of any such costs that are not properly allocated to Bonneville's PNW AC Intertie.

Bonneville shall forecast its share of operations, maintenance, capital, and related costs for activities that PacifiCorp performs on Bonneville/PacifiCorp jointly-owned PNW AC Intertie facilities based on forecasts received from PacifiCorp or on actual costs for the most recent 12 consecutive month period prior to preparation of an Operating Plan.

**VI. Contracts and Rates Costs**

**A. Contracts and Rates Costs - Functionalization Factor**

For each Operating Plan, Bonneville's total contracts and rates direct costs, indirect costs, and overhead costs (Schedule F, lines 5, 6, and 7) shall be adjusted by a contracts and rates functionalization factor (Schedule F, line 3). The contracts and rates functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the contracts and rates functionalization factor shall be the ratio of (a) Bonneville's total transmission-related contracts and rates cost (Schedule F, line 1) over (b) Bonneville's total contracts and rates cost (Schedule F, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Contracts and Rates Cost.

**B. Contracts and Rates Costs - Allocation Factor**

The allocation factor (Schedule F, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Contracts and Rates Costs - Total Contracts and Rates Costs**

Bonneville's total contracts and rates costs for a fiscal year (Schedule F, line 8) shall include Bonneville's expenses (including direct, indirect, and

overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: rate filings with FERC, development of rates customers pay Bonneville for electric power and for wheeling their own power on Bonneville's transmission system; negotiation, administration, and coordination of contracts for power sales, power exchanges, conservation, wheeling and resource services; and analyzing, processing, and issuing all customer power bills; and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule F, line 9, shall reflect Contracts and Rates Cost.

**VII. Power Scheduling Costs**

For each Operating Plan, Bonneville's total power scheduling direct costs, indirect costs, and overhead costs (Schedule G, lines 5, 6, and 7) shall be adjusted by a power scheduling functionalization factor (Schedule G, line 3). The power scheduling functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the power scheduling functionalization factor shall be the ratio of (a) Bonneville's total transmission-related power scheduling cost (Schedule G, line 1) over (b) Bonneville's total power scheduling cost (Schedule G, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Power Scheduling Cost.

**B. Power Scheduling Costs - Allocation Factor**

The allocation factor (Schedule G, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Power Scheduling Costs - Total Power Scheduling Costs**

Bonneville's total power scheduling costs for a fiscal year (Schedule G, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: scheduling and marketing power to Bonneville customers and interconnected utilities, forecasting the hourly power requirements of Bonneville customers and the interchange of power with the region's interconnected electric utilities and with utilities outside the region, scheduling power to be generated at each Federal plant, weather and streamflow forecasting, controlling the reservoirs, implementing the intertie access policy, coordinating power production with the multi-purpose operation of the Federal power system, seasonal load/resource planning, developing current short-term operating plans, short-term marketing of Bonneville's surplus firm power, exchanges, and nonfirm energy, and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule G, line 9, shall reflect Power Scheduling Cost.

**VIII. End of Term Costs**

When all facilities of the PNW AC Intertie are determined, in accordance with Northwest Intertie Agreements, to be no longer operable, Bonneville shall include a forecast of all Bonneville's costs associated with

decommissioning the PNW AC Intertie and credits resulting from such decommissioning in the Operating Plan for each fiscal year that such End of Term Costs are to be incurred. Bonneville's End of Term Costs for a fiscal year (Schedule H, line 4) shall include Bonneville's costs (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: decommissioning, razing structures, disposal of debris, site restoration, meeting all requirements of Federal, state, or local applicable law relating to the foregoing activities, and other decommissioning activities undertaken by Bonneville that are consistent with decommissioning activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1		_____	
MFUs of the FCRTS	2		_____	
Allocation factor (Line 1/Line 2)	3		_____	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from rate case	4		_____	
Bonneville's total system operations cost from rate case	5		_____	
Operations functionalization factor (Line 4/Line 5)	6		_____	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	_____	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	_____	_____	_____



	Line No.	Forecast	Actual	Difference
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	_____	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	_____	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	_____	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	_____	_____	_____
<b>F. Operations Cost (Lines 8 + 10 + 12)</b>	13	_____	_____	_____

**Schedule B for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC)</b>				
<b>Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1		_____	
Bonneville's total PSC maintenance cost from rate case	2		_____	
PSC maintenance functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	_____	_____	_____
MFU Allocation Factor (Schedule A, line 3)	5		_____	
PSC direct maintenance cost for Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	_____	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	_____	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	_____	_____	_____

**C. Allocation Factor**

Bonneville's total system maintenance direct cost	9			
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10			

**D. Indirect Cost**

Bonneville's total system maintenance indirect cost	11			
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12			

**E. Overhead Cost**

Bonneville's total system maintenance overhead cost	13			
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14			

**F. Maintenance Cost  
(Lines 8 + 12 + 14)**

15			
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**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>	5	_____	_____	_____

Notes:

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.

Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

Schedule D for FY XXXX

	Line No.	Allocated Actual
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment	1	_____
Bonneville's Dittmer control equipment investment	2	_____
General plant investment of lines 1 and 2 functionalized to generation	3	_____
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price	4	_____
General plant investment recovered from Capacity Owners for Upgrades	5	_____
Adjusted general plant investment functionalized to transmission (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	_____
BPA total annual cost of Line 6 general plant investment	7	_____
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study	8	_____
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8)	9	_____
Bonneville's PNW AC Intertie investment from Segmentation Study	10	_____
<b>General Plant Cost (Line 9 + Line 10)</b>	11	_____

Schedule E for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	_____	_____	_____
<b>B. Other PNW AC Interie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	_____	_____	_____

Schedule F for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates Costs</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1		_____	
Total contracts and rates cost from rate case	2		_____	
Contracts and rates cost functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4		_____	
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	_____	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	_____	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	_____	_____	_____
<b>D. Contracts and Rates Cost (Line 8 * Line 3 * Line 4)</b>	9	_____	_____	_____

**Schedule G for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VII. Power Scheduling Costs</b>				
<b>A. Power Scheduling Functionalization Factor</b>				
Transmission-related power scheduling costs from rate case	1			
Total power scheduling cost from rate case	2			
Power scheduling cost functionalization factor (Line 1/Line 2)	3			
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4			
<b>C. Total Power Scheduling Costs</b>				
Power scheduling direct costs	5			
Power scheduling indirect costs	6			
Power scheduling overhead costs	7			
Bonneville's total power scheduling costs (Line 5 + Line 6 + Line 7)	8			
<b>D. Power Scheduling Cost (Line 8 * Line 3 * Line 4)</b>	9			



Schedule H for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	_____	_____	_____
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	( _____ )	( _____ )	( _____ )
<b>D. End of Term Costs</b>				
	4	_____	_____	_____

**Tacoma's Initial Transaction with California Utility**

Name of parties: Tacoma / Western Area Power Administration

Term of Contract December 31, 2004

Date of Execution: December 31, 1984

Amount of Transaction (MW): 41 MW, December through August  
74 MW, September through November



**Department of Energy**  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

SEP 26 1994

In reply refer to: PMT

Amendatory Agreement No. 1  
Contract No. DE-MS79-94BP94525

Mr. John F. Spencer  
General Manager  
Public Utility District No. 1 of  
Snohomish County, Washington  
2320 California Street  
Everett, WA 98201

Dear Mr. Spencer:

This letter constitutes an agreement between the United States of America, Department of Energy, acting by and through the Bonneville Power Administration (Bonneville) and Public Utility District No. 1 of Snohomish County Washington (Snohomish), a municipal corporation operating and existing under the laws of the State of Washington, to amend Contract No. DE-MS79-94BP94525 (Capacity Ownership Agreement), executed by Snohomish on September 23, 1994. This letter agreement shall be effective upon the Effective Date of the Capacity Ownership Agreement and shall have the same term as the Capacity Ownership Agreement.

Bonneville and Snohomish agree that subparagraphs 3(b)(2)(A) and 3(b)(2)(B) in the Capacity Ownership Agreement shall be deleted and the following language shall be substituted:

- (A) Snohomish may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by Snohomish. Snohomish agrees to provide Bonneville access to its available unused Scheduling Share on any hour under terms and conditions comparable to those provided by Bonneville to Snohomish under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto.
- (B) Snohomish hereby waives any rights it may have under Exhibit B of the Long-Term Intertie Access Policy as Exhibit B existed on June 30, 1994, and any rights to access under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto. Snohomish does not waive any other rights it may have to transmission access on Bonneville's PNW-PSW Intertie including but

not limited to: (1) firm transmission service on Bonneville's PNW-PSW Intertie; (2) transmission service under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto; or (3) any rights to request an order from the Federal Energy Regulatory Commission under Section 211, or any other applicable section, of the Federal Power Act or any successor statute, requiring Bonneville to provide transmission service to Snohomish consistent with the above.

Snohomish and Bonneville agree to negotiate in good faith the terms and conditions under which Snohomish shall be able to access Bonneville's PNW-PSW Intertie under the condition 1 provisions of section 5(c)(1) of Bonneville's Long-Term Intertie Access Policy as it existed on June 30, 1994.

In order for Bonneville to implement the changes to (A) and (B) reflected above, a new paragraph 3(b)(2)(D) needs to be added to the Capacity Ownership Agreement. The language follows:

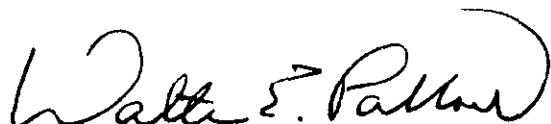
- (D) Bonneville shall not be obligated to provide wheeling under the open market provisions of section 5(c)(2) of Bonneville's Long-Term Intertie Access Policy, including any revisions or amendments thereto, until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to Snohomish or until December 27, 1994, which ever occurs sooner.

Further, the following amendments to subsection 4(a) are made. Delete the phrase "(and only Snohomish)" in the first sentence. Before the first sentence, insert the following three sentences: "For purposes of this section 4, all references to Snohomish shall mean Snohomish or its designee. Any such designee shall be identified in writing by Snohomish to Bonneville. Only one entity may submit schedules on Snohomish's behalf at any one time."

In addition, the following amendment to Exhibit E, paragraph B, is made. Delete the phrase "subparagraph 3(b)(1)(C)" and replace it with the phrase "subparagraph 3(b)(1)(C) or 3(b)(2)(B)."

If the foregoing terms are acceptable to Snohomish, please sign and return one copy of this letter agreement. The remaining copy is for your files.

Sincerely,



Walter E. Pollock  
Group Vice President, Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

ACCEPTED:

PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY

By 

Name Mark A. Schinman  
(Print/Type)

Title Deputy General Manager

Date October 25, 1994

Effective Date October 25, 1994

**PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT**  
executed by the  
**UNITED STATES OF AMERICA**  
**DEPARTMENT OF ENERGY**  
acting by and through the  
**BONNEVILLE POWER ADMINISTRATION**  
and  
**PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY,**  
**WASHINGTON**

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- Exhibit A (CO-94, AC-93, IS-93 Rate Schedules and General Transmission Rate Schedule Provisions)
- Exhibit B (Annual Costs Rate)
- Exhibit C (Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share)
- Exhibit D (Lump Sum Payment Calculation)
- Exhibit E (Transmission Loss Factors)
- Exhibit F (Bonneville's PNW AC Intertie)
- Exhibit G (Capacity Owners)
- Exhibit H (Provisions Required by Statute or Executive Order)
- Exhibit I (Bonneville's PNW AC Intertie Costs)
- Exhibit J (Snohomish's Initial Transaction with California Utility)

This PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT (Agreement) is entered into as of September 27, 1994, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville or BPA) and PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY WASHINGTON (Snohomish), a municipal corporation operating and existing under the laws of the state of Washington. Each of Bonneville and Snohomish is sometimes referred to individually in this Agreement as "Party"; Bonneville and Snohomish are sometimes referred to together in this Agreement as "Parties."

**W I T N E S S E T H :**

WHEREAS Bonneville, Portland General Electric Company (Portland), and PacifiCorp Electric Operations (PacifiCorp) planned and constructed improvements and additions to the Northwest portion of the PNW-PSW Intertie; and

WHEREAS such construction was completed in December 1993 resulting in 1600 MW of additional PNW AC Intertie Rated Transfer Capability in a north-to-south direction and 1225 MW of additional PNW AC Intertie Rated Transfer Capability in a south-to-north direction; and

WHEREAS pursuant to the Northwest Intertie Agreements, Bonneville operates the PNW AC Intertie, in coordination with Portland and PacifiCorp, as a single system so as to maximize PNW AC Intertie Rated Transfer Capability and Operational Transfer Capability consistent with Prudent Utility Practice; and

WHEREAS Bonneville has developed a proposal to offer to PNW non-Federal scheduling utilities and joint agencies capacity ownership rights in 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability; and

WHEREAS such proposal has been studied in Bonneville's Final Non-Federal Participation Environmental Impact Statement, dated January 1994, and was the selected alternative in the Administrator's Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville and Seattle executed a Memorandum of Understanding, DE-MS79-92BP93479, dated September 18, 1991, which, among other things, sets forth the principles for Snohomish's capacity ownership rights in Bonneville's PNW AC Intertie; and

WHEREAS interest expressed in capacity ownership by PNW non-Federal scheduling utilities and joint agencies exceeded the 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability offered by Bonneville, and as a result Bonneville developed and applied an allocation methodology selected in the Administrator's Capacity Ownership Record of Decision, dated March 25, 1994; and

WHEREAS concurrent with the execution of this Agreement, Bonneville and Snohomish are executing Contract No. DE-MS79-94BP93999 to provide Snohomish with, among other things, network wheeling between the John Day Substation and Snohomish's transmission system; and



WHEREAS Bonneville is authorized pursuant to law to dispose of electric power generated at various Federal hydroelectric projects in the PNW, or acquired from other resources, to construct and operate transmission facilities, to provide transmission and other services, and to enter into agreements to carry out such authority;

NOW, THEREFORE, Bonneville and Snohomish agree as follows:

1. **DEFINITIONS**

- (a) "Adjusted Capacity Ownership Price" means the price calculated pursuant to column 2, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (b) "Adjusted Lump Sum Payment" means the Adjusted Capacity Ownership Price multiplied by Snohomish's Capacity Ownership Share (in kilowatts), as described with more particularity in section D of Exhibit D.
- (c) "Allocated Direct Costs" means for each fiscal year the Operations Cost as allocated to Bonneville's PNW AC Intertie in accordance with section I.C of Exhibit I for such fiscal year. Allocated Direct Costs are not included in Direct Costs, Indirect Costs, or Overhead Costs.
- (d) "Allowance for Funds Used During Construction" or "AFUDC" constitutes interest on the funds used for utility plant under construction. The AFUDC rate approximates the cost of money being used to finance current construction work in progress and is calculated in accordance with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors. AFUDC shall be capitalized in accordance with Bonneville's accounting procedures and practices, and in any event consistent with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors.

- (e) "Billing Provisions" means those provisions set forth in Exhibit B, Part B.
- (f) "Bonneville's PNW AC Intertie" means facilities of the PNW AC Intertie owned partially or entirely by Bonneville specified in Exhibit F together with the equipment and facilities installed in or connected to such facilities specified in Exhibit F, to the extent such facilities are necessary for the transmission of power on the PNW AC Intertie.
- (g) "Bonneville's PNW AC Intertie Operational Transfer Capability" means Bonneville's PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and by operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (h) "Bonneville's PNW AC Intertie Rated Transfer Capability" means Bonneville's share of the PNW AC Intertie Rated Transfer Capability as determined in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (i) "Capacity Owner" means each of the parties listed in Exhibit G to the extent that such party has entered into a Capacity Ownership Agreement.
- (j) "Capacity Ownership Agreement" means, in the singular, this Agreement or the agreement, substantially identical to this

Agreement, entered into by each Capacity Owner (other than Snohomish) and Bonneville, and in the plural, this Agreement and all such substantially identical agreements entered into respectively by Capacity Owners (other than Snohomish) and Bonneville, as each such agreement may be amended or supplemented from time to time pursuant to the terms of such agreement, concerning (among other things) the rights of such Capacity Owner with respect to the PNW AC Intertie.

- (k) "Capacity Ownership Percentage" means, as of the Effective Date, in the singular, the percentage of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Snohomish pursuant to this Agreement, which percentage is determined by dividing Snohomish's Capacity Ownership Share as of the Effective Date by Bonneville's PNW AC Intertie Rated Transfer Capability as of the Effective Date (such percentage being subject to change pursuant to the terms of this Agreement), and in the plural, the percentages of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which percentages are set forth in Exhibit G (each of such percentages being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (l) "Capacity Ownership Rights" means the rights of Snohomish pursuant to this Agreement.
- (m) "Capacity Ownership Share" means, except as such term is otherwise used in sections III.A and III.B of the CO-94 rate set forth in Exhibit A on the Effective Date, in the singular, the MW amount of Bonneville's PNW AC Intertie Rated Transfer Capability owned by Snohomish pursuant to this Agreement, which MW amount is set forth in Exhibit C (such amount being subject to change pursuant to the terms of this Agreement), and in the plural, the MW amounts of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective

Capacity Ownership Agreements (other than this Agreement), which amounts are set forth in Exhibit G (each of such amounts being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).

- (n) "Committee" has the meaning set forth in subsection 12(a).
- (o) "Contracts and Rates Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville's total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville's PNW AC Intertie.
- (p) "Direct Costs" means any costs incurred by Bonneville which are readily identifiable, or obviously traceable to, and directly benefit, a specific Bonneville program, project, or other cost objective. Direct Costs are not included in Allocated Direct Costs, Overhead Costs, or Indirect Costs. The methods for determining Direct Costs for Bonneville's PNW AC Intertie are set forth in sections II.B and III.A of Exhibit I.
- (q) "Effective Date" means the date as of which this Agreement becomes effective pursuant to section 2.
- (r) "End of Term Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.
- (s) "FERC" means the Federal Energy Regulatory Commission or its regulatory successor.
- (t) "General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for

Bonneville's general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

- (u) "GTRSP" or "GTRSPs" means Bonneville's General Transmission Rate Schedule Provisions, set forth in Exhibit A, as such provisions may be revised from time to time.
- (v) "Indirect Costs" means any costs incurred by Bonneville which indirectly benefit and are directly charged to a specific Bonneville program, project, or other cost objective for which a Direct Cost or Allocated Direct Cost is charged. Indirect Costs shall not be included in Allocated Direct Costs, Direct Costs, or Overhead Costs. The methods for determining Indirect Costs for Bonneville's PNW AC Intertie are set forth in sections I.D, II.D, and III.B of Exhibit I.
- (w) "Initial Capacity Ownership Price" means \$215 per kilowatt, the calculation of which charge is set forth in column 1, section B of Exhibit D and in section III.A of the CO-94 rate in Exhibit A.
- (x) "Initial Lump Sum Payment" means the Initial Capacity Ownership Price multiplied by Snohomish's Capacity Ownership Share (in kilowatts), as described with more particularity in section C of Exhibit D.
- (y) "Interconnection Agreement" means the "Interim Interconnection Agreement Between Certain California-Oregon Transmission Project Participants and Northwest Participants," Contract No. DE-MS79-91BP93158, as amended or superseded.
- (z) "Joint AC Intertie" is as defined in the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.

- (aa) "Joint Intertie Scheduling Office" or "JISO" means the group of Bonneville, Portland, and PacifiCorp schedulers, which, among other things, accepts PNW-PSW Intertie Preschedules.
- (bb) "Maintenance Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville's PNW AC Intertie, maintenance Indirect Costs for Bonneville's PNW AC Intertie, and maintenance Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.
- (cc) "MW" means megawatt.
- (dd) "Northwest Intertie Agreements" means the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (ee) "Operating Plan" means, subject to subsection 13(o), with respect to any fiscal year commencing on or after the day on which the annual costs rate set forth in Exhibit B has been approved on an interim or final basis by FERC, the written document containing the information described in subsection 13(c), as such document may be amended pursuant to section 13, 14, or 16.
- (ff) "Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

- (gg) "Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.
- (hh) "Overhead Cost" means administrative and general costs, support service costs, or other costs similar in nature which are distributed or allocated by Bonneville to Bonneville's PNW AC Intertie. Overhead Costs are not included in Direct Costs, Allocated Direct Costs, or Indirect Costs. The methods for determining Overhead Costs are set forth in sections I.E, II.E, and III.B of Exhibit I.
- (ii) "Pacific Northwest" or "PNW" means the area defined as the Pacific Northwest in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. section 839a(14).
- (jj) "Pacific Time" means Pacific Standard Time and Pacific Daylight Time as each is in force.
- (kk) "PNW AC Intertie" means facilities including, but not limited to, the following: two 500 kV transmission lines extending from John Day Substation to the Malin Substation and to the California-Oregon border; portions of John Day, Grizzly, and Malin Substations and the Sand Springs, Fort Rock, and Sycan Compensation Stations; a portion of the Buckley-Summer Lake 500 kV transmission line and associated substations; portions of the Buckley-Marion and Marion-Alvey 500 kV transmission lines and associated facilities; a portion of Bonneville's capacity rights in the Summer Lake-Malin 500 kV transmission line; Bonneville's rights in the Meridian-Malin 500 kV transmission line and Bonneville's share of ownership of the Alvey-Meridian 500 kV transmission line; Captain Jack Substation; the 500 kV transmission line from Captain Jack Substation to the California-Oregon border; and any modifications, additions, improvements, or other alterations thereto.

- (ll) "PNW AC Intertie Operational Transfer Capability" means the PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (mm) "PNW AC Intertie Rated Transfer Capability" means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.
- (nn) "Pacific Northwest-Pacific Southwest Intertie" or "PNW-PSW Intertie" means the DC transmission line between the Celilo Converter Station in The Dalles, Oregon, and the Sylmar Converter Station near Los Angeles, California, the PNW AC Intertie, and the AC Intertie in California including, without limitation, the California-Oregon Transmission Project.
- (oo) "Pacific Northwest Non-Federal Utility" means any electric utility that serves retail load in the region consisting of (1) the states of Oregon, Washington, and Idaho, the portion of the state of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River Basin drainage basin, and (2) any contiguous areas, not in excess of seventy-five air miles from the area referred to in (1) above, which areas are a part of the service area of a rural electric cooperative power customer served by Bonneville on the effective date of the Pacific Northwest Power Planning and Conservation Act (P.L. 96-501) having a distribution system from which it serves both within and without such region.



- (pp) "Power Scheduling Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville's PNW AC Intertie.
- (qq) "Preschedule" means the schedule submitted by Snohomish to the JISO pursuant to paragraph 4(b)(1) for transactions prepared each Working Day for the period beginning 2400 hours of the current Working Day through 2400 hours of the next Working Day.
- (rr) "Prudent Utility Practice" means, at any particular time, the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto that would achieve the desired result or, if there are no such practices, methods, and acts, the practices, methods, and acts which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to achieve the desired result consistent with reliability and safety.
- (ss) "Real-time Schedule" means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed by the JISO to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by Snohomish.
- (tt) "Reinforcement" means any transmission plant modification, addition, improvement, or other alteration to the Federal Columbia River Transmission System which is not a Replacement or an Upgrade and which is made pursuant to subsection 7(c).
- (uu) "Reinforcement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1)

simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Snohomish for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Reinforcement. Reinforcement Costs do not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

- (vv) "Replacement" means for any transmission plant addition, betterment, renewal and equipment or facility that takes the place of or adds to any existing equipment or facility on Bonneville's PNW AC Intertie that does not increase Bonneville's PNW AC Intertie Rated Transfer Capability.
- (ww) "Replacement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Snohomish for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Replacement. General Plant Cost is not included in Replacement Costs. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.
- (xx) "Revised Adjusted Capacity Ownership Price" means a price calculated pursuant to column 3, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (yy) "Revised Adjusted Lump Sum Payment" means a Revised Adjusted Capacity Ownership Price multiplied by Snohomish's Capacity

Ownership Share (in kilowatts), as described with more particularity in section E of Exhibit D.

- (zz) "Scheduler" means the person authorized by a Party to accept or submit schedules pursuant to section 4 and authorized to implement, interpret, and vary the scheduling procedures set forth in such section pursuant to this Agreement.
  
- (aaa) "Scheduling Percentage" means the percentage of the PNW AC Intertie Rated Transfer Capability owned by Snohomish pursuant to this Agreement, which percentage is determined by dividing Snohomish's Capacity Ownership Share by the PNW AC Intertie Rated Transfer Capability.
  
- (bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of Snohomish's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour.
  
- (ccc) "Scheduling Utility" means either (i) a Pacific Northwest Non-Federal Utility that serves a retail service area and operates a generation control area, or (ii) a Pacific Northwest Non-Federal Utility designated by Bonneville as a "computed requirements customer" or its equivalent.
  
- (ddd) "Term" means the period of effectiveness of this Agreement set forth in subsection 2(a).
  
- (eee) "Third AC Intertie" means the Third AC Intertie Project, which project increased the PNW AC Intertie Rated Transfer Capability by 1600 MW in a north-to-south direction and by 1225 MW in a south-to-north direction.
  
- (fff) "Third AC Intertie Project" means the Third AC Intertie System Reinforcement and the construction of the Alvey-Meridian 500 kV transmission line and of facilities related to such transmission line during the period from July 1984 through December 1993.

- (ggg) "Third AC Intertie System Reinforcement" means the improvements, additions and modifications to the PNW AC Intertie constructed during the period from July 1984 through December 1993 plus the construction of the Captain Jack substation and of facilities related to such substation during the period from July 1984 through December 1993.
- (hhh) "Upgrade" means any MW increase to Bonneville's PNW AC Intertie Rated Transfer Capability which arises from or is related to an increase to the PNW AC Intertie Rated Transfer Capability.
- (iii) "Working Day" means any day other than Saturday, Sunday, and a legal holiday recognized by the Federal government or Snohomish.

## 2. TERM AND TERMINATION

- (a) This Agreement shall become effective as of the date of execution and delivery of this Agreement by both of the Parties. This Agreement shall continue in effect so long as any facilities of the PNW AC Intertie are in existence and operable, unless otherwise earlier terminated by written agreement of both of the Parties or unless terminated pursuant to the terms of this Agreement. All liabilities incurred under this Agreement shall be preserved until satisfied.
- (b) Notwithstanding subsection 2(a), no Capacity Ownership Rights may be exercised by Snohomish until payment is made by Snohomish pursuant to paragraph 9(a)(1) and received by Bonneville.
- (c) If Bonneville does not receive the payment from Snohomish pursuant to paragraph 9(a)(1), then Bonneville shall have the option to terminate this Agreement by delivering to Snohomish written notice of such termination.
- (d) Notwithstanding subsection 2(a), if Bonneville incurs End of Term Costs, the following provisions of this Agreement, and all rights and

obligations thereunder, shall continue in full force and effect until Bonneville renders its final bill to Snohomish pursuant to subsection 9(b), unless this Agreement is earlier terminated by mutual agreement of the Parties: subsections 2(b), 2(c), and 2(d), sections 1, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, and 23, and Exhibits A, B, C, D, F, G, H, and I. All liabilities incurred under such provisions of this Agreement shall be preserved until satisfied.

- (e) If this Agreement has not become effective pursuant to subsection 2(a) within 12 months following the date upon which Bonneville executes and delivers this Agreement to Snohomish, this Agreement shall be void ab initio and of no force or effect.

### 3. **CAPACITY RIGHTS**

- (a) **Purchase and Sale of Capacity**

Pursuant to the terms and conditions of this Agreement, Snohomish purchases from Bonneville and Bonneville sells to Snohomish the Capacity Ownership Rights.

- (b) **Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, Snohomish shall notify Bonneville in writing of Snohomish's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and Snohomish shall have the right to utilize its Scheduling Share pursuant to the paragraph Snohomish elects. Prior to Bonneville's receipt of such notification, Snohomish shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If Snohomish fails to make an election within the prescribed time period, Snohomish shall be deemed to have elected the option set forth in paragraph 3(b)(1).

(1) **No Third Party Wheeling**

- (A) Except as expressly provided in subparagraph 3(b)(1)(B), Snohomish shall not use its Scheduling Share to transmit power or energy (except for inadvertent power flows) that Snohomish does not own at the California-Oregon border or for which transmission Snohomish receives any revenue that would be reportable in Snohomish's accounting system where revenues received for wheeling for other entities would be booked.
- (B) If Snohomish's Scheduling Share is not fully utilized by Snohomish in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions over the unused portion of Snohomish's Scheduling Share for such hour but no longer than such hour. Snohomish shall be compensated for such wheeling solely by the payments as described in sections 3(b)(1)(B)(i) and (ii) below. For purposes of this subparagraph 3(b)(1)(B), Snohomish's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that Snohomish has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour on any MW amount of Snohomish's Scheduling Share. In return for Snohomish's Scheduling Share being made available to Bonneville pursuant to this subparagraph 3(b)(1)(B), Bonneville shall pay Snohomish
- (i) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a north-to-south direction under the IS-93 rate, section II.A,

or its successor to other entities in such hour, and (2) the ratio of Snohomish's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour, and

- (ii) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a south-to-north direction under the IS-93 rate, section II.A or its successor to other entities in such hour, and (2) the ratio of Snohomish's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour; provided, however, that Bonneville shall not be required to make payments for such south-to-north wheeling pursuant to this section 3(b)(1)(B)(ii) earlier than two years after the Effective Date.

Bonneville shall make payments pursuant to this subparagraph 3(b)(1)(B) in accordance with paragraph 9(f)(1).

- (C) During an outage resulting from maintenance activities on the PNW AC Intertie performed by Bonneville other than maintenance activities undertaken due to emergencies or uncontrollable forces, the following shall apply:
  - (i) When Snohomish's Scheduling Share for any given hour is reduced as a consequence of such outage which reduces in Bonneville's PNW AC

Intertie Operational Transfer Capability such that Snohomish's Scheduling Share for such hour is less than the MW amount of the aggregate of Snohomish's net firm transactions identified by Snohomish to Bonneville pursuant to section 3(b)(1)(C)(iv) for such hour, Bonneville shall, subject only to sections 3(b)(1)(C)(ii) and (iii) and to the immediately succeeding sentence, wheel on a firm basis that portion of Snohomish's firm transactions that equals the difference between Snohomish's Scheduling Share for such hour and the MW amount of the aggregate of Snohomish's firm transactions for such hour up to, but not in excess of, Snohomish's Capacity Ownership Share. Notwithstanding the foregoing, Bonneville shall only be obligated to provide such wheeling to the extent that each party with whom Snohomish is conducting such firm transactions has received a sufficient AC Intertie capacity allocation in California to accommodate such transactions. Snohomish shall pay the IS-93 rate, section II.A, or its successor for such wheeling pursuant to this section 3(b)(1)(C)(i) in accordance with subsection 9(d).

- (ii) Bonneville shall not be obligated to provide such wheeling to Snohomish pursuant to section 3(b)(1)(C)(i) if no PNW AC Intertie Operational Transfer Capability is available to Bonneville after Bonneville has scheduled all of Bonneville's Firm Schedules. For purposes of this section, "Bonneville's Firm Schedules" shall mean schedules for assured delivery or other firm transmission contracts pursuant to the Long-Term Intertie Access Policy, as revised or amended, or its successor, and schedules for



Bonneville's firm power and energy sales and exchange transactions

- (iii) Bonneville shall not be obligated to provide such wheeling to Snohomish pursuant to section 3(b)(1)(C)(i) until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to Snohomish or until October 1, 1994, whichever occurs sooner.
  
- (iv) No later than ten Working Days prior to the first day of deliveries under a firm transaction, Snohomish shall identify such firm transaction to Bonneville. Snohomish shall identify such firm transaction to Bonneville by providing to Bonneville a copy of Snohomish's contract for such firm transaction (after information considered proprietary by Snohomish has been redacted by Snohomish). Bonneville shall review such contract to verify that the transaction is firm. If Snohomish and its contractor represent or state in writing that the transaction set forth in their contract is firm, Bonneville shall accept that written representation or statement as dispositive of the question of whether such transaction is firm. Implementation of such procedures in this section 3(b)(1)(C)(iv) may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written.
  
- (D) Snohomish retains any and all rights of access which it would otherwise have to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(2) **Third Party Wheeling**

(A) Snohomish may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by Snohomish. Snohomish shall have no obligation under this Agreement to make available to Bonneville any portion of Snohomish's Scheduling Share which is unused in any hour, and Bonneville shall not schedule over Snohomish's Scheduling Share without Snohomish's prior consent.

(B) Snohomish hereby waives any and all rights of access to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor; provided, however, that Bonneville may, at its option, provide Snohomish with access to Bonneville's PNW-PSW Intertie pursuant to any provision of the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(C) Snohomish shall provide Bonneville with the information set forth in sections 3(b)(2)(C)(i) through 3(b)(2)(C)(iii) when Snohomish uses its Scheduling Share to export from the Pacific Northwest energy or power received from third parties. Such exports of energy or power on a real-time basis or for durations of less than four months are excluded from this obligation. For exports of four months or longer duration made on behalf of third parties pursuant to paragraph 3(b)(2), such information shall include:

- (i) the name and business address of the third party;
- (ii) the amount of power or energy and the duration of the transaction; and

- (iii) the name of the recipient or purchaser of such power.

Any additional information needed by Bonneville will be obtained from such third party.

#### 4. SCHEDULING

(a) Snohomish (and only Snohomish) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to Snohomish's Scheduling Share for such hour. The MW amount of Snohomish's Scheduling Share deemed to be scheduled on the PNW AC Intertie pursuant to this Agreement, in any hour, shall be determined as the net of Snohomish's north-to-south schedules and south-to-north schedules (net schedules) for such hour.

(b) Snohomish shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1) and 4(b)(2). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours referenced in paragraphs 4(b)(1) and 4(b)(2) are Pacific Time.

##### (1) Preschedules

(A) Bonneville shall make available to Snohomish on each Working Day as soon as practicable after 0800 hours information regarding the PNW AC Intertie Operational Transfer Capability with respect to Preschedules. In the event an emergency or uncontrollable force causes a change in the PNW AC Intertie Operational Transfer Capability, Bonneville shall notify Snohomish of such change as soon as practicable.

- (B) If Long-Term Intertie Access Policy Condition 1 Formula Allocation Procedures or their successor (Condition 1) are expected by Bonneville to become effective, Bonneville shall so notify Snohomish no later than 0930 hours on the Working Day prior to the day on which Condition 1 is expected to become effective. Bonneville shall notify Snohomish no later than 0930 hours on the Working Day prior to the day on which Condition 1 ceases to be in effect.
- (C) Snohomish shall submit its Preschedule to the Joint Intertie Scheduling Office no later than 1000 hours on each Working Day if Condition 1 is in effect. If Condition 1 is not in effect, Snohomish shall submit its Preschedule to the JISO no later than 1430 hours on each Working Day.

(2) **Real-time Scheduling**

- (A) Real-time Schedules shall be arranged through Bonneville's real-time scheduling office. Bonneville's real-time Scheduler shall make reasonable efforts to receive Real-time Schedules; provided, however, that Bonneville's real-time Scheduler may, but is not required to, accept Real-time Schedules between 1500 and 2200 hours on the Working Day preceding the day for which such Real-time Schedule is submitted.
- (B) Real-time Schedules shall be arranged for a full hour. Arrangements shall be completed no later than 30 minutes prior to that hour.
- (C) Snohomish shall use best efforts to keep schedule changes to a minimum; provided, however, that for purposes of this subparagraph 4(b)(2)(C), "best efforts"

shall not be deemed to refer to efforts made regardless of their economic effect.

(D) The requirements set forth in subparagraphs 4(b)(2)(B) and 4(b)(2)(C) do not preclude schedule changes at other times as may be deemed necessary by any control area operators or other entities involved in effectuating such schedule changes. Such control area operators and other entities shall be notified by Bonneville of such schedule changes as soon as practicable in accordance with Prudent Utility Practice for purposes of coordinating ramps and proper accounting. Such schedule changes shall be deemed to occur at mid-ramp. The mid-ramp time and the integrated value for the hour shall be subject to the mutual agreement by such control area operators and other entities.

(E) Subject to compliance with subparagraphs 4(b)(2)(A) through 4(b)(2)(D) and with other applicable PNW AC Intertie scheduling practices then in effect, Bonneville shall make Snohomish's schedule change.

(c) Bonneville shall make deliveries of power or energy to the California-Oregon border or the John Day Substation, as appropriate, pursuant to schedules submitted in accordance with this section 4; provided, however, that Bonneville shall not be required to make such deliveries in an hour to the extent that Snohomish's schedule exceeds Snohomish's Scheduling Share for such hour, except as may be expressly provided pursuant to subparagraph 3(b)(1)(C).

## 5. **UPGRADES**

(a) Bonneville shall consult with the Committee one time each year regarding any plans for Upgrades.

- (b) Prior to the completion of an Upgrade, Bonneville shall provide to Snohomish information in writing regarding estimated costs and the MW amount of such Upgrade, to the extent that such information is available to Bonneville.
  
- (c) As soon as practicable following the completion of an Upgrade, Bonneville shall notify Snohomish in writing of the following: (1) the MW amount of such Upgrade; (2) the capital and related costs (less any amount of such costs collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, to Bonneville for completing or implementing such Upgrade; and (3) calculations of (A) Snohomish's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade and (B) Snohomish's Capacity Ownership Percentage multiplied by the capital and related costs, if any, to Bonneville for completing or implementing such Upgrade. Snohomish may elect to acquire a share of such Upgrade in an amount up to Snohomish's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade. Within 100 days from receipt of such written notice from Bonneville, Snohomish shall notify Bonneville in writing of Snohomish's decision regarding such acquisition. If Snohomish elects to acquire, pursuant to this subsection 5(c), a portion of such Upgrade, Snohomish's notice to Bonneville shall include the percentage of such Upgrade that Snohomish elects to acquire (Acquisition Percentage). If Snohomish fails to notify Bonneville within such 100-day period, Snohomish shall be deemed to have elected not to acquire any of such Upgrade.
  
- (d) If Snohomish elects to acquire a portion of an Upgrade pursuant to subsection 5(c), the cost to Snohomish shall be Snohomish's Acquisition Percentage multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such cost collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, incurred by Bonneville for completing or implementing such Upgrade. Snohomish shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.

- (e) If Snohomish's Acquisition Percentage with respect to an Upgrade equals its Capacity Ownership Percentage and the Acquisition Percentage of any other Capacity Owner with respect to such Upgrade is less than its Capacity Ownership Percentage, then the following shall apply:
- (1) Bonneville shall, in a timely manner, provide written notice simultaneously to Snohomish and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage) of the MW amount equal to 100 percent of that portion of an Upgrade offered to, but not acquired by, the Capacity Owners pursuant to subsection 5(c) (Unacquired Share). If Snohomish and each of such other Capacity Owners have agreed in writing to an apportionment as among themselves of the Unacquired Share (Apportionment), Snohomish may, within 45 days following receipt of such written notice from Bonneville, by written notice request Bonneville to offer in writing to Snohomish such portion of the Unacquired Share as has been apportioned to Snohomish pursuant to the Apportionment, and Bonneville shall offer to Snohomish such portion of the Unacquired Share.
  - (2) If Bonneville does not receive from Snohomish and from each Capacity Owner referred to in paragraph 5(e)(1) the requests for offer pursuant to paragraph 5(e)(1) within the 45-day period specified in such paragraph, Bonneville shall, in a timely manner, offer in writing simultaneously to Snohomish and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage), respectively, a portion of an Upgrade offered to, but not acquired by, the other Capacity Owners pursuant to paragraph 5(e)(1) (Second Unacquired Share) up to the "Additional Share Offered" determined as follows:

Additional Share Offered = (A + B) x C

where: A = Snohomish's Capacity Ownership Percentage.

B = Percentage equal to the sum of Capacity Ownership Percentages of Capacity Owners that acquired respectively an Acquisition Percentage equal to their Capacity Ownership Percentage.

C = Second Unacquired Share.

(3) Within 30 days following Snohomish's receipt of Bonneville's written offer pursuant to paragraph 5(e)(2), Snohomish shall notify Bonneville in writing of Snohomish's decision regarding acquisition of the Additional Share Offered. If Snohomish fails to notify Bonneville within such 30-day period, Snohomish shall be deemed to have elected not to acquire any of the Additional Share Offered. If Snohomish elects pursuant to this paragraph 5(e)(3) to acquire any or all of the Additional Share Offered, then:

(A) Snohomish shall include in its notice to Bonneville pursuant to this paragraph 5(e)(3) such share (Additional Share Acquired) of the Additional Share Offered as Snohomish elects to acquire pursuant to this paragraph 5(e)(3), and

(B) the cost to Snohomish with respect to such acquisition shall be equal to the proportion of the Additional Share Acquired to such Upgrade multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such costs collected by Bonneville through charges other than payments by Snohomish pursuant to subsection 5(d) or subparagraph 5(e)(3)(B)), if any, to Bonneville for completing or implementing such Upgrade. Snohomish shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.



- (f) All capacity offered but not acquired pursuant to subsections 5(c) and (e) shall for purposes of this Agreement remain with Bonneville.
- (g) After Snohomish has either accepted or declined all offers of capacity by Bonneville pursuant to subsections 5(c) and (e), Snohomish's Capacity Ownership Share, Capacity Ownership Percentage, and Scheduling Percentage in Exhibit C shall be revised to reflect changes resulting from Snohomish's elections pursuant to subsections 5(c) and (e). Revision of Exhibit C shall be pursuant to subsection 19(d). Exhibit G shall be revised accordingly pursuant to subsection 19(i).

## 6. SALE OR ASSIGNMENT

- (a) This Agreement or any interest herein shall not be transferred, sold, alienated, or assigned by Snohomish to any person without Bonneville's prior and express written consent. Such consent shall not be unreasonably withheld. In determining whether to grant its consent under this subsection 6(a), Bonneville shall take into consideration information including, but not limited to, whether the person or entity to whom this Agreement or any interest therein is proposed to be transferred, sold, alienated, or assigned is a person or entity entitled to request and receive transmission services pursuant to section 211 of the Federal Power Act, whether such person or entity can either provide its own scheduling services or has contracted with another entity to provide such scheduling services, whether such person or entity has the financial capability to meet the payment obligations under this Agreement, and whether the person or entity is either electrically interconnected to Bonneville's transmission system or has contractual arrangements for wheeling with others who are electrically interconnected to Bonneville's transmission system. This Agreement shall inure to the benefit of and be binding upon the Parties, their respective legal representatives, permitted assigns, and successors in interest. Any transfer, sale, alienation, or assignment made by Snohomish in violation of this section 6 shall be void ab initio and without any force or effect whatsoever.

- (b) Bonneville hereby consents to the transfer, sale, alienation, or assignment by Snohomish to any other Capacity Owner of all or part of its Capacity Ownership Share and all of Snohomish's rights and obligations pursuant to this Agreement with respect thereto. Bonneville hereby further consents to the transfer, sale, alienation, or assignment by Snohomish of the entire Agreement and of all of Snohomish's rights and obligations under this Agreement to a Scheduling Utility.
- (c) Bonneville hereby consents to the assignment by Snohomish of this Agreement or of any of Snohomish's rights under this Agreement as security for any indebtedness, whether present or future, of Snohomish pursuant to any mortgage, trust, security agreement or similar instrument of indebtedness (each such instrument, a Debt Instrument) made by and between Snohomish and any mortgagee, trustee, secured party or holder of such instrument of indebtedness, respectively; provided, however, that if Snohomish has defaulted in the performance of its obligations under any Debt Instrument, such that the mortgagee, trustee, secured party or holder of such Debt Instrument, as the case may be, would be entitled at that time to accelerate the amount of indebtedness under such Debt Instrument, Snohomish shall give Bonneville prompt written notice in reasonable detail of such default and shall, at Bonneville's election, enter into good faith discussions with Bonneville regarding the cure of such default.
- (d) If Snohomish transfers, sells, alienates, or assigns, with Bonneville's consent, all or any portion of this Agreement and any rights and obligations pursuant to this Agreement to any person or party, Snohomish shall give Bonneville written notice of such transfer, sale, alienation, or assignment within 10 days after the execution and delivery of the agreement effectuating such transaction by all parties to such transaction.

7. **OPERATION, MAINTENANCE, AND MANAGEMENT**

- (a) Pursuant to the terms and conditions of the Northwest Intertie Agreements, Bonneville is the operator of the PNW AC Intertie. As such, Bonneville is responsible for the dispatch of the PNW AC Intertie in accordance with Prudent Utility Practice. Bonneville's duties as operator of the PNW AC Intertie shall include, but are not limited to, consistent with Prudent Utility Practice and Northwest Intertie Agreements: (1) determining the PNW AC Intertie Operational Transfer Capability; (2) implementing and assisting in rectifying emergency outages on the PNW AC Intertie due to system emergencies or uncontrollable forces; (3) implementing maintenance outages; and (4) giving and receiving switching orders on the PNW AC Intertie. In making any determination or in taking any other action referred to in the immediately preceding sentence, Bonneville shall give fair consideration to Snohomish's interests to the extent such interests have been expressed to Bonneville in writing. Bonneville shall operate, maintain, and manage Bonneville's PNW AC Intertie, and study, plan, and implement Upgrades, consistent with Prudent Utility Practice.
- (b) Bonneville shall determine and revise as necessary the PNW AC Intertie Rated Transfer Capability consistent with Prudent Utility Practice and engineering studies based on then existing reliability criteria developed by the North American Electric Reliability Council, the Western Systems Coordinating Council, the Northwest Power Pool, and Bonneville. In the event the PNW AC Intertie Rated Transfer Capability is changed, Bonneville shall promptly notify Snohomish in writing of such change and the new PNW AC Intertie Rated Transfer Capability. If and to the extent that the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability change substantially, Bonneville shall notify Snohomish in writing of such change.
- (c) If at any time during the Term, Bonneville's PNW AC Intertie Rated Transfer Capability becomes less than 3450 MW, or if at any time

during the Term there is an imminent likelihood that Bonneville's PNW AC Intertie Rated Transfer Capability would become less than 3450 MW, then Bonneville shall reinforce the Federal Columbia River Transmission System so as to raise Bonneville's PNW AC Intertie Rated Transfer Capability to 3450 MW or otherwise to prevent Bonneville's PNW AC Intertie Rated Transfer Capability from becoming less than 3450 MW. Snohomish's Capacity Ownership Share shall not be decreased on account of any failure by Bonneville to reinforce the Federal Columbia River Transmission System pursuant to this subsection 7(c).

- (d) In the event that Bonneville implements a Reinforcement pursuant to subsection 7(c), Bonneville shall equitably allocate the Reinforcement Cost for such Reinforcement between Bonneville and Snohomish based on factors including, but not limited to, load responsibility, contractual obligation and generation integration responsibility. Any equitable allocation or agreed to allocation (pursuant to the immediately succeeding sentence) of a Reinforcement Cost pursuant to this subsection 7(d) shall be reflected as a Reinforcement Cost in an Operating Plan proposed by Bonneville pursuant to section 13. To the extent that Bonneville and Snohomish have agreed in writing to an allocation of a Reinforcement Cost incurred by Bonneville pursuant to an agreement or modification referred to in subsection 8(b), the Reinforcement Cost so allocated shall not be subject to arbitration pursuant to section 14 or section 15. Any Reinforcement Cost not allocated to Snohomish pursuant to this subsection 7(d) shall not be payable by Snohomish pursuant to this Agreement.
- (e) Bonneville shall provide Snohomish notice of maintenance outages in accordance with the accepted standards for notice on the PNW AC Intertie. Such notice shall include an evaluation of the impact on Snohomish's Scheduling Share. In scheduling or planning maintenance on PNW AC Intertie, Bonneville shall give fair consideration to Snohomish's interests to the extent such interests have been expressed to Bonneville in writing.

8. **EXISTING AGREEMENTS**

- (a) Bonneville shall use good faith efforts to maintain in effect the Interconnection Agreement or its successor.
- (b) Bonneville shall use its best efforts to maintain Snohomish's rights under this Agreement (i) by making no modification to the Northwest Intertie Agreements, (ii) by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie, and (iii) by making no modification to the agreements referred to in the immediately preceding clause (ii) that would have a substantial negative impact on Snohomish's rights pursuant to sections 3, 4, 7, or to subsection 9(b), 9(c), or 11(a) without Snohomish's prior written consent. Without limiting, modifying, or otherwise affecting any of its rights pursuant to sections 9, 13, 14, 15, and 16, Snohomish hereby consents to Bonneville's modification of the Northwest Intertie Agreements or Bonneville's entering into other agreements or modification to such Agreements with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification or such agreement is made or entered into by Bonneville for the purpose of performing Bonneville's obligations pursuant to subsection 7(c).

9. **PAYMENT PROVISIONS**

As full compensation for their respective payment obligations under this Agreement, Snohomish shall make payments to Bonneville in accordance with the provisions of this section 9, and Bonneville shall make payments and refunds to Snohomish in accordance with the provisions of this section 9.

- (a) **Lump Sum Payment**
  - (1) As soon as practicable after the Effective Date, Bonneville shall render a bill to Snohomish for the Initial Lump Sum Payment (less the negotiation deposit, if any, with applicable interest as

described in section C of Exhibit D) and such bill shall include as an attachment and as part of such bill a completed section C of Exhibit D, setting forth the calculation of such Initial Lump Sum Payment due Bonneville in accordance with section IV.A of the CO-94 rate set forth in Exhibit A. Snohomish shall make such payment pursuant to the CO-94 rate and the applicable GTRSPs set forth in Exhibit A. Each of Bonneville and Snohomish agrees that section C of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

(2) **Calculation and Billing of the Adjusted Capacity Ownership Price**

(A) Approximately December 1995, or as soon as practicable thereafter, Bonneville shall, in accordance with section IV.B of the CO-94 rate set forth in Exhibit A, calculate the Adjusted Capacity Ownership Price to reflect actual construction costs of the facilities listed in section A of Exhibit D and the actual AFUDC with respect to such facilities. Such calculation shall be made in accordance with column 2, section B of Exhibit D.

(B) Promptly after Bonneville has calculated the Adjusted Capacity Ownership Price pursuant to subparagraph 9(a)(2)(A), Bonneville shall render a bill or refund voucher to Snohomish, and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2), section B of Exhibit D (with a completed column 2), and a completed section D of Exhibit D reflecting the Adjusted Lump Sum Payment. If the Adjusted Lump Sum Payment is greater than the Initial Lump Sum Payment, Snohomish shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may

mutually agree, the amount set forth in such bill, which amount shall be equal to the amount set forth on line 7, section D of Exhibit D (such amount including interest as set forth on line 6, section D of Exhibit D). If the Adjusted Lump Sum Payment is less than the Initial Lump Sum Payment, Bonneville shall pay to Snohomish, within 30 days after the date of such refund voucher, the amount set forth in such refund voucher, which amount shall be equal to the amount set forth on line 7, section D, of Exhibit D (such amount including interest as set forth on line 6, section D, of Exhibit D). Each of Bonneville and Snohomish agrees that sections A, B, and D of Exhibit D are consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(3) Calculation and Billing of the Revised Adjusted Capacity Ownership Price**

- (A) After payment is made by Snohomish pursuant to subparagraph 9(a)(2)(B), or a refund is made by Bonneville to Snohomish pursuant to subparagraph 9(a)(2)(B), Bonneville may, in accordance with the CO-94 rate set forth in Exhibit A, make one or more adjustments to the Adjusted Capacity Ownership Price; provided, that any such adjustment shall be made by Bonneville within 30 days after the date on which
- (i) Bonneville receives, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp or any other entity performing work for Bonneville on the Third AC Intertie Project, payment from Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, or
  - (ii) Bonneville pays, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville,

Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, any amount to Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project; and provided, further, that no adjustment of the Adjusted Capacity Ownership Price or of any Revised Adjusted Capacity Ownership Price shall be made by Bonneville after December 31, 2005.

- (B) Promptly after Bonneville has calculated a Revised Adjusted Capacity Ownership Price, Bonneville shall render to Snohomish a bill or refund voucher with respect to such Revised Adjusted Capacity Ownership Price and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), section B of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), and a completed section E of Exhibit D reflecting the current Revised Adjusted Capacity Ownership Price and the current Revised Adjusted Lump Sum Payment. If the current Revised Adjusted Lump Sum Payment with respect to such Revised Adjusted Capacity Ownership Price is greater than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, then Snohomish shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in the bill referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E, of Exhibit D with respect



to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E, of Exhibit D). If the current Revised Adjusted Lump Sum Payment is less than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, Bonneville shall pay to Snohomish, within 30 days after the date of such refund voucher, the amount set forth in the refund voucher referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E of Exhibit D). Each of Bonneville and Snohomish agrees that section E of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

- (4) For purposes of implementing the CO-94 rate, the following shall apply:
- (A) the calculations pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the adjustment "to reflect the difference between the actual and the estimated Capacity Ownership Price" required under section IV.B of the CO-94 rate;
  - (B) the calculations of interest pursuant to footnote 2 of section D of Exhibit D and footnote 2 of section E of Exhibit D shall be deemed to be the computation of "interest using the weighted average interest rate on Bonneville's outstanding bonds" required pursuant to section IV.B of the CO-94 rate;
  - (C) the calculations of the Adjusted Capacity Ownership Price and of the Revised Adjusted Capacity Ownership Price pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be

deemed to be the determination of the "actual Capacity Ownership Price" required pursuant to section IV.B of the CO-94 rate;

- (D) as used in the CO-94 rate, the terms "Bonneville's PNW AC Intertie," "PNW AC Intertie," "Third AC Intertie," "Third AC Intertie Project," and "Third AC Intertie System Reinforcement" shall be deemed to have the respective meanings of such terms set forth in section 1;
- (E) as used in the CO-94 rate, the term "Capacity Ownership Share" shall be deemed to mean "Capacity Ownership Percentage" as defined in section 1;
- (F) the indirect costs and overhead costs described in footnote 5 of section B of Exhibit D shall be deemed to be the indirect costs and overhead costs referred to in section III.A of the CO-94 rate; and
- (G) the last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

- (5) For purposes of application of the CO-94 rate set forth in Exhibit A, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors

in substance), shall have any application or effect with respect to this Agreement:

- (A) section I;
- (B) section III.A;
- (C) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
- (D) subsection 4 of section IV.A;
- (E) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A; and
- (F) for purposes of subsection 16(e) of this Agreement and as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

(b) **Annual Charges**

(1) **Payments Pursuant to AC-93 Rate**

- (A) From and after the first Working Day after Bonneville receives payment from Snohomish pursuant to paragraph 9(a)(1), Bonneville shall bill Snohomish on the monthly power bill in accordance with the AC-93 rate set forth in Exhibit A. Snohomish shall pay such bill in accordance with the applicable GTRSPs set forth in Exhibit A.
- (B) For purposes of application of the AC-93 rate, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate

Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:

- (i) section I;
  - (ii) section III.A;
  - (iii) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
  - (iv) the first sentence of subsection 3 of section IV.A;
  - (v) subsection 4 of section IV.A;
  - (vi) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A;
  - (vii) the first paragraph of subsection 6 of section IV.A; and
  - (viii) as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.
- (C) The last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such

terms shall be as defined in any of the above Acts.

(D) Bonneville hereby agrees that the provisions of the AC-93 rate shall have no application or effect with respect to the following:

- (i) any replacement of the series capacitor banks containing polychlorinated biphenyl at the Sand Springs, Sycan and Fort Rock Substations; and
- (ii) any replacement commenced prior to the Effective Date or not completed prior to September 30, 1995.

(E) Upon and after the effective date of the annual costs rate set forth in Exhibit B, Bonneville shall cease billing Snohomish pursuant to the AC-93 rate.

(2) **Payments Pursuant to Annual Costs Rate**

From and after the date the annual costs rate set forth in Exhibit B becomes effective, the following shall apply:

(A) **Operations Costs, Maintenance Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs**

- (i) During each fiscal year during the Term, Bonneville shall bill Snohomish on the monthly power bill, and Snohomish shall pay, pursuant to Exhibit B, forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs,

and forecast End of Term Costs for such fiscal year. Such costs shall be, respectively, the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the fiscal year in which such month occurs.

- (ii) Within eight months after the end of each fiscal year during the Term (such fiscal year being hereinafter referred to as a "Fiscal Year"), Bonneville shall determine and calculate, pursuant to Exhibit I, Schedules A, B, D, E, F, G, and H, actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year most recently ended.
- (iii) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year is greater than the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year, Bonneville shall refund to Snohomish the difference between such forecast costs and such actual costs as a lump sum payment, with interest pursuant to

section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(u) is made. Bonneville shall, promptly following the date on which the calculation of such difference is made, provide Snohomish written notice of such refund. Within the 30-day period referred to in the first sentence of this section 9(b)(2)(A)(iii), Bonneville shall provide to Snohomish an Operating Plan amended in accordance with subsection 13(k) containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (iv) If, based on the calculation performed pursuant to subparagraph 9(b)(2)(A)(ii), the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is equal to or less than 105 percent, but greater than 100 percent, of the sum of the forecast Operations costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs in the Operating Plan for the Fiscal Year, Bonneville shall bill to

Snohomish on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Snohomish shall pay such bill in accordance with the Billing Provisions. Within the 30-day period referred to in the immediately preceding sentence, Bonneville shall provide to Snohomish an amended Operating Plan containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (v) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the actual Operations Cost, actual Maintenance Cost, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is greater than 105 percent of the sum of the forecast Operations Cost, forecast Maintenance Cost, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year, Bonneville shall bill to Snohomish on the monthly power bill the difference between such



actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Snohomish shall pay such bill in accordance with the Billing Provisions; provided, however, that Bonneville shall not bill Snohomish pursuant to this section 9(b)(2)(A)(v) any amount which exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year unless and until such amount which exceeds 100 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year has been included in an Operating Plan amended pursuant to subsection 13(k).

- (vi) Simple interest shall be accrued on payments or refunds due pursuant to this paragraph 9(b)(2) with respect to any fiscal year during the Term using the weighted average interest rate on Bonneville's outstanding bonds or other debt instruments then used by Bonneville and such interest shall accrue from (and including) the date of the last day of such fiscal year to (but excluding) the date of refund to Snohomish or to (but excluding) the due date of a payment due Bonneville.

**(B) Replacement Cost and Reinforcement Cost**

Bonneville shall bill Snohomish on the monthly power bill Replacement Costs for any Replacement and Reinforcement Costs for any Reinforcement. Bonneville shall render such bill within 15 months following the date on which the project work order for such Replacement or such Reinforcement, as the case may be, is closed. Snohomish shall pay such bill pursuant to Exhibit B and sections 9(b)(2)(B)(i), 9(b)(2)(B)(ii), 9(b)(2)(B)(iii) and 9(b)(2)(B)(iv).

- (i) If the forecast Replacement Cost for a Replacement is greater than the actual Replacement Cost for such Replacement or if the forecast Reinforcement Cost for a Reinforcement is greater than the actual Reinforcement Cost for such Reinforcement, Bonneville shall bill Snohomish the actual Replacement Cost for such Replacement or the actual Reinforcement Cost for such Reinforcement, as the case may be. Bonneville shall provide to Snohomish an Operating Plan amended in accordance with subsection 13(k) containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement, as the case may be.
- (ii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is equal to or less than 105 percent, but greater than 100 percent, of the forecast Replacement Cost or forecast

Reinforcement Cost, Bonneville shall bill Snohomish such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Snohomish shall pay such bill pursuant to subparagraph 9(b)(2)(B). Bonneville shall provide to Snohomish an amended Operating Plan containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the difference between the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement.

- (iii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is greater than 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill Snohomish such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and Snohomish shall pay such bill pursuant to subparagraph 9(b)(2)(B); provided, however, that Bonneville shall not bill Snohomish pursuant to this subparagraph 9(b)(2)(B) any amount which exceeds 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, as the case may be, unless and until such amount which exceeds 100 percent of such forecast Replacement or such forecast Reinforcement Cost, as the case may be, has been included in an amended Operating Plan pursuant to subsection 13(k).

- (iv) Charges pursuant to sections 9(b)(2)(B)(i), (ii) and (iii) for Replacement Costs and Reinforcement Costs shall accrue simple interest pursuant to section III.D of Exhibit I.

(c) **Upgrade Charges**

For purposes of implementing the CO-94 rate, the following shall apply:

- (1) as used in the CO-94 rate, the term "upgrade" shall be deemed to mean "Upgrade" as defined in section 1, the term "rated transfer capability" shall be deemed to mean "PNW AC Intertie Rated Transfer Capability" as defined in section 1 and the term "AFUDC" shall be deemed to have the meaning set forth for such term in section 1;
- (2) the "Capacity Ownership Share of the capital and related cost of the upgrade," referred to in section III.B of the CO-94 rate shall be deemed to be the costs pursuant to subsection 5(d) and subparagraph 5(e)(3)(B), as applicable; and
- (3) "construction costs (including direct, indirect and overhead costs) and AFUDC" referred to in section III.B of the CO-94 rate and "related costs" referred to in section III.B of the CO-94 rate together shall be deemed to be Upgrade costs and shall be determined in the same manner in which Replacement Costs are determined pursuant to section III of Exhibit I; provided, however, that expenses that are properly allocable to an Upgrade (i.e., "related costs" referred to in section III.B of the CO-94 rate) in accordance with generally accepted accounting principles (as defined in Exhibit I) may be included by Bonneville in Upgrade costs for such Upgrade.

(d) **Payments of Charges Pursuant to Section 3(b)(1)(C)(i)**

Bonneville shall bill Snohomish for wheeling provided pursuant to section 3(b)(1)(C)(i) on Snohomish's monthly power bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A and Snohomish shall pay such bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A; provided, however, that under any successor to the IS-93 rate, Snohomish shall not be obligated to pay any rate or charge greater than the rate or charge payable by any other party to which Bonneville provides nonfirm wheeling services on Bonneville's PNW AC Intertie for such party's nonfirm transaction of a duration similar to Snohomish's wheeling transaction pursuant to section 3(b)(1)(C)(i).

(e) **Suspension for Failure to Perform**

(1) If at any time during the term of this Agreement Bonneville does not receive payment due and owing to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d), Bonneville shall be entitled to suspend performance of its obligations to Snohomish pursuant to section 4 without incurring any liability to Snohomish therefor; provided, that Bonneville shall not be entitled to suspend performance pursuant to this paragraph 9(e)(1) earlier than five Working Days following receipt from Bonneville by Snohomish of written notice of such suspension. Such suspension shall continue in effect until the next Working Day following the Working Day on which Snohomish makes payment in full to Bonneville of the balance owed to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d). During the period of such suspension, Snohomish shall not be entitled to participate through the Committee in any review of an Operating Plan commenced by the Committee pursuant to section 13 during such period of suspension, or to participate in any arbitration commenced by the Committee pursuant to sections 14 and 15 during such period of suspension, or to

participate in any audit commenced by the Committee pursuant to section 16 during such period of suspension

- (2) If during any period in any month Bonneville fails to make deliveries in accordance with subsection 4(c), Snohomish shall be entitled, without incurring any liability to Bonneville therefor, to delay any payment due and owing to Bonneville by Snohomish pursuant to subsection 9(b) or 9(d) for a period, equal to the period during which Bonneville failed to make such deliveries, commencing on the date the monthly power bill for such month would otherwise be payable by Snohomish pursuant to this Agreement; provided, however that Snohomish's entitlement pursuant to this paragraph 9(e)(2) shall apply only with respect to the amount of such monthly power bill to be paid directly to Bonneville or its agent.

**(f) Payments or Refunds by Bonneville**

- (1) Bonneville shall make any payment to Snohomish pursuant to subparagraph 3(b)(1)(B) within 30 days following the end of the month in which such payment becomes due to Snohomish pursuant to subparagraph 3(b)(1)(B).
- (2) Bonneville shall pay to Snohomish, in a lump sum, any refund due to Snohomish pursuant to subsection 16(e) or paragraph 16(f)(2) within 30 days following the date on which such refund becomes due to Snohomish pursuant to subsection 16(e) or paragraph 16(f)(2), respectively.
- (3) Bonneville shall pay any refund, credit, or payment due to Snohomish under section 18 pursuant to the terms and conditions set forth in section 18.
- (4) Each payment, credit or refund due to Snohomish by Bonneville pursuant to this Agreement shall be made by Bonneville, at Bonneville's option, (A) by check payable to the

order of Snohomish, (B) by electronic funds transfer of immediately available funds into such account as may be designated in writing by Snohomish from time to time for such purpose or (C) by crediting the amount of such payment, credit or refund on Snohomish's power bill.

10. **TRANSMISSION LOSSES**

- (a) To compensate Bonneville for transmission losses incurred by Bonneville in making deliveries scheduled by Snohomish pursuant to this Agreement, Snohomish shall make available, or arrange to have made available, to Bonneville, at any point mutually acceptable to the Parties at which the respective electric systems of Snohomish and Bonneville are interconnected, on the corresponding hour 168 hours later or on another hour to be agreed upon, the amounts of electric power equal to Snohomish's net PNW AC Intertie schedule multiplied by the appropriate loss factor specified in Exhibit E. Snohomish's net PNW AC Intertie schedule shall be, for any given hour, the absolute value of the sum of Snohomish's north-to-south schedules (positive) and south-to-north schedules (negative) for such hour.
- (b) Upon the conclusion of any review by Bonneville of the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan provided to the Committee pursuant to section 13. The Committee may make recommendations regarding such results and any revisions to the loss factor in Exhibit E, Part A. Only recommendations regarding assumptions (including, without limitation, data inputs and source of date) made by Bonneville in its review or revision of the loss factor in Exhibit E, Part A, and recommendations regarding the results of such review or revision shall be subject to arbitration pursuant to section 14.
- (c) Snohomish's Scheduling Share shall not be reduced by any amount of losses returned to Bonneville pursuant to subsection 10(a).

11 **REMEDIAL ACTIONS**

(a) **Bonneville's Responsibilities**

- (1) Within five days after the Effective Date, Bonneville shall notify Snohomish in writing of the plan for remedial actions required to maintain the PNW AC Intertie Rated Transfer Capability, which plan shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice. If and to the extent that such plan is amended, modified, or replaced, Bonneville shall, promptly following such amendment, modification, or replacement, provide written notice to Snohomish of such amendment, modification, or replacement, as the case may be. Bonneville shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, required to maintain the portion of Bonneville's PNW AC Intertie Rated Transfer Capability not purchased by Capacity Owners. Such remedial actions shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice.
- (2) Bonneville shall be responsible for generating appropriate control signals for transmission to Snohomish for purposes of effectuating remedial actions pursuant to this section.

(b) **Snohomish's Responsibilities**

- (1) Snohomish shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other remedial actions required to maintain Snohomish's Capacity Ownership Share. Such remedial actions shall be consistent with Western System Coordinating Council standards, the plan



referred to in paragraph 11(a)(1) and Prudent Utility Practice. Bonneville may perform engineering analyses to confirm Snohomish's providing capability to arm and having available appropriate remedial actions pursuant to this paragraph 11(b)(1).

- (2) In any given hour, Snohomish shall be responsible for providing sufficient remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, to maintain Snohomish's schedule on the PNW AC Intertie for such hour. To the extent that load tripping or generator dropping is required as a remedial action by Snohomish pursuant to this paragraph 11(b)(2) in any given hour, the required amount of such load tripping or such generator dropping shall be determined by dividing the amount of power scheduled by Snohomish on Snohomish's Scheduling Share in such hour by the total amount of power scheduled on the PNW AC Intertie in such hour and multiplying the result by the total amount of generation or load (in MW) to be armed for the PNW AC Intertie in such hour.
- (3) Snohomish shall provide, design, operate, and maintain the necessary equipment to accept control signals from Bonneville and to transmit such signals to Snohomish's generator dropping, load tripping, or other remedial action sites, and to arm and initiate the appropriate control action(s). Such design, operation, and maintenance shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1), and Prudent Utility Practice.
- (4) Snohomish and Bonneville may mutually agree that Bonneville will, pursuant to terms and conditions mutually acceptable to the Parties, provide the remedial actions required of Snohomish pursuant to subsection 11(b).

12      **CAPACITY OWNERS' COMMITTEE**

(a)      **Composition of Committee**

Snohomish may appoint one representative (and an alternate who may act in the absence of such representative) as a member of the Capacity Owners' Committee (Committee). If during any period Snohomish fails to appoint a representative to the Committee, Snohomish waives any and all rights during such period that would otherwise have accrued to it, individually or as a member of the Committee, pursuant to sections 12, 13, 14, 15, and 16 of this Agreement. Snohomish hereby appoints as its representative pursuant to this subsection the following representative and alternate to the Committee:

Representative: Assistant General Manager for Rates and  
Resources

Alternate: Manager of Power Supply

(b)      **Convening Meetings**

- (1) Any Capacity Owner that has appointed a representative to the Committee may convene a meeting of the Committee pursuant to the procedures set forth in subsection 12(e). The Capacity Owner convening a Committee meeting shall be responsible for preparing any necessary notices, identifying the subject matter and issues to be discussed, and transmitting notices and relevant documents to the other Committee members and, if appropriate, to Bonneville.
- (2) At the written request of any Capacity Owner that has appointed a representative to the Committee, Bonneville shall attend Committee meetings.

- (3) The Committee may conduct business only at a properly convened meeting at which a quorum, as defined in subsection 12(c), is present. The Committee shall make or convey any request, designation, recommendation, notice, appointment, submission, audit report or exception, or statement to which Bonneville is required to respond or which creates or triggers an obligation of Bonneville, pursuant to this Agreement, only upon a decision of the Committee made at a properly convened meeting at which a quorum is present.
- (4) Each fiscal year, Bonneville shall convene an annual meeting of the Committee. The purpose of such annual meeting shall be to discuss the Operating Plan delivered, pursuant to subsection 13(b), to each Capacity Owner that has appointed a representative to the Committee. Bonneville shall convene such annual meeting no earlier than 15 days, but no later than 30 days, following the date of such delivery of the Operating Plan.
- (5) In addition to the meeting referred to in paragraph 12(b)(4), Bonneville may, at its discretion, convene meetings of the Committee, pursuant to the procedures set forth in subsection 12(e), to present to the Committee any information Bonneville deems relevant.

(c) **Meeting Quorum**

The respective representatives of all of the Capacity Owners that have appointed a representative to the Committee, less one, shall constitute a quorum.

(d) **Meetings by Telephone Conference**

Committee meetings pursuant to the Capacity Ownership Agreements may be conducted by telephone provided all Capacity Owners and, if

appropriate, Bonneville, are notified pursuant to the procedures set forth in subsection 12(e) of any such meeting.

(e) **Meeting Notices**

- (1) All Committee meeting notices pursuant to the Capacity Ownership Agreements shall be provided in writing no less than 14 days prior to such meeting.
- (2) Any Committee meeting notice required by this section shall be deemed properly made if delivered in person, by electronic facsimile, or by mail or other qualified delivery service, postage prepaid, to the person specified below:

**If to Bonneville:**

**Group Vice President for Marketing, Conservation and  
Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232  
Telephone (503) 230-5152  
Facsimile (503) 230-5207**

**If to Puget:**

**Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515  
Telephone (206) 462-3137  
Facsimile (206) 462-3175**

**If to Seattle:**

**Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101**

Telephone (206) 386-4530

Facsimile (206) 386-4955

If to PNGC:

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232  
Telephone (503) 288-1234  
Facsimile (503) 288-2334

If to Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201  
Telephone (206) 258-8211  
Facsimile (206) 258-8305

If to Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411  
Telephone (206) 502-8294  
Facsimile (206) 502-8628

Attendance at a meeting by a representative of a Capacity Owner constitutes waiver by such Capacity Owner of notice of such meeting.

- (3) Either Party may, by written notice to the other Party and to the Capacity Owners other than Snohomish, change the

designation, address, or facsimile number of the person so specified by it in subsection 12(a) or paragraph 12(e)(2).

13. **OPERATING PLAN AND AMENDMENTS TO THE OPERATING PLAN**

- (a) The provisions of this section shall become effective commencing August 1, 1995, provided, however, that unless and until the annual costs rate set forth in Exhibit B is approved by FERC on an interim basis, Bonneville shall not have any right pursuant to this Agreement to bill or charge to Snohomish, and Snohomish shall not have any obligation pursuant to this Agreement to pay to Bonneville, any amount pursuant to any Operating Plan.
- (b) **Delivery of Operating Plan**
  - (1) On or before August 1, 1995, Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1996 and an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1997.
  - (2) Not later than one year preceding the first day of each fiscal year, other than the fiscal years specified in paragraph 13(b)(1), Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for such fiscal year.
- (c) Each Operating Plan delivered pursuant to subsection 13(b) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast costs for the fiscal year to which such Operating Plan pertains, and such Operating Plan may contain such other information as Bonneville may deem relevant; and each amendment of an Operating Plan delivered pursuant to subsection 13(k) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast or actual costs, as appropriate, for the

fiscal year to which such Operating Plan pertains, and such amendment may contain such other information as Bonneville may deem relevant:

- (1) a forecast of, or the actual, Allocated Direct Cost of Operations Cost (pursuant to section I.C of Exhibit I), Indirect Cost of Operations Cost (pursuant to section I.D of Exhibit I), and Overhead Cost of Operations Cost (pursuant to section I.E of Exhibit I) in the format set forth in Exhibit I, Schedule A;
- (2) a forecast of, or the actual, Direct Cost of Maintenance Cost (pursuant to section II.B of Exhibit I), Indirect Cost of Maintenance Cost (pursuant to section II.D of Exhibit I), and Overhead Cost of Maintenance Cost (pursuant to section II.E of Exhibit I) in the format set forth in Exhibit I, Schedule B;
- (3) a forecast of, or the actual, Direct Cost of Replacements and Reinforcements (pursuant to section III.A of Exhibit I), Indirect Cost and Overhead Cost of Replacements and Reinforcements (pursuant to section III.B of Exhibit I), and AFUDC of Replacements and Reinforcements (pursuant to section III.C of Exhibit I) in the format set forth in Exhibit I, Schedule C, for each Reinforcement and Replacement which is expected to be, in the fiscal year to which the Operating Plan pertains, a planned new start, construction work in progress on a previously initiated Reinforcement or Replacement, as the case may be, or a closed work order. The forecast shall include for each such Reinforcement or Replacement an estimate of the total cost of construction and the cost to be incurred with respect to such Reinforcement or Replacement during each fiscal year until the work order for such Reinforcement or Replacement has been closed. Bonneville may elect, but shall not be required, to include in any such forecast the information set forth in the immediately preceding sentence regarding any Replacement and Reinforcement which is expected to be planned a new start in any fiscal year following the fiscal year

to which the Operating Plan pertains. In the event Bonneville elects to forecast Direct Cost, Indirect Cost, and Overhead Cost of any Reinforcement or Replacement which is expected to be a planned new start in any fiscal year subsequent to the fiscal year to which the Operating Plan pertains, Bonneville shall provide to the Committee such forecast costs, in the format set forth in Exhibit I, Schedule C (together with additional information pertinent to such forecast costs as required by paragraph 13(c)(9)), 30 days prior to the date such Operating Plan is delivered to the Committee pursuant to subsection 13(b). In addition, Bonneville shall include such forecast costs in the Operating Plan delivered to the Committee pursuant to subsection 13(b);

- (4) the General Plant Cost (pursuant to section IV of Exhibit I) in the format set forth in Exhibit I, Schedule D;
- (5) a forecast of, or the actual, Other Costs (pursuant to section V of Exhibit I) in the format set forth in Exhibit I, Schedule E;
- (6) a forecast of, or the actual, Contracts and Rates Costs (pursuant to section VI of Exhibit I) in the format set forth in Exhibit I, Schedule F;
- (7) a forecast of, or the actual, Power Scheduling Costs (pursuant to section VII of Exhibit I) in the format set forth in Exhibit I, Schedule G;
- (8) a forecast of, or the actual, End of Term Costs (pursuant to section VIII of Exhibit I) in the format set forth in Exhibit I, Schedule H. Such forecast shall include Bonneville's proposed apportionment of such End of Term Costs among Snohomish and Capacity Owners other than Snohomish and Bonneville's rationale for such apportionment;



- (9) additional information pertinent to the forecast costs, actual costs, and General Plant Cost provided pursuant to paragraphs 13(c)(1) through 13(c)(8), including, without limitation, descriptions of the activities or projects and explanations of the costs comprising the Direct Cost components of such forecast costs, actual costs, and General Plant Cost, and explanations of MFU counts; and
- (10) if Bonneville has reviewed the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), the Operating Plan shall contain the results of such review, including any revision to the loss factor in Exhibit E, Part A, pursuant to subsection 10(b), and any additional information pertinent to such review.

(d) **Requests by Committee**

- (1) No later than 15 days after the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), the Committee may make a single request of Bonneville in writing for:
  - (A) such supporting documentation, data, and information as may be reasonably necessary to analyze (i) the Operating Plan, or its constituent parts, delivered to the Committee pursuant to subsection 13(b), or (ii) any amendment to an Operating Plan pursuant to subsection 13(k); and
  - (B) such documentation, data, and information relating to Bonneville's present or past activities or practices concerning Bonneville's PNW AC Intertie and to alternatives considered by Bonneville to costs or activities described in the Operating Plan or any amendment to an Operating Plan as may be reasonably necessary for the Committee to formulate recommendations pursuant to subsection 13(e);

provided, however, that with regard to requests for documentation, data, and information pursuant to this paragraph 13(d)(1), the Committee must designate in such request the specific item in the Operating Plan or in any amendment to an Operating Plan to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information. Such single request may contain multiple parts.

- (2) The Committee shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to paragraph 13(d)(1).
- (3) Bonneville shall have 20 days from the date it receives any request pursuant to paragraph 13(d)(1) to provide the documentation, data, and information requested; provided, however, that Bonneville shall be under no obligation (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Committee, or (D) to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or any regulation and Executive Order applicable to Bonneville.
- (4) The Committee in such request shall designate one of its members to be its representative for the sole purpose of receiving such documentation, data, or information from Bonneville pursuant to this subsection 13(d). Bonneville shall deliver such documentation, data, or information to the

representative designated by the Committee to receive such materials.

- (5) For purposes of this subsection 13(d) and subsection 13(f), each of Bonneville and the Committee shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests for, documentation, data, and information and responses to such requests.
- (e) The Committee shall have 20 days from the date on which it receives documentation, data, or information from Bonneville pursuant to subsection 13(d) or, if none was requested, 50 days from the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), whichever date is later, to recommend to Bonneville in writing a revision or revisions to any forecast cost or General Plant Cost in the Operating Plan. The Committee shall have the time periods set forth in subsection 13(m) to recommend to Bonneville in writing a revision or revisions to a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan. Such recommendation shall set forth, at a minimum, the exact revisions to the forecast cost or General Plant Cost proposed by the Committee and the reasons for such revisions. Failure of the Committee to recommend a revision or revisions to all or any portion of a forecast cost or General Plant Cost in the Operating Plan or a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan within the applicable time limit set forth above shall be deemed to constitute acceptance by the Committee of all portions of the forecast costs and General Plant Cost of the Operating Plan for which the Committee has not recommended a revision.
- (f) No later than 15 days after receipt of a Committee recommendation made pursuant to subsection 13(e), Bonneville may make a single request (which may contain multiple parts) in writing of the Committee for such supporting documentation, data, and information as may be reasonably necessary to analyze the Committee's recommendation, including without limitation, any estimated costs or

forecast costs contained in such recommendation; provided, however, that the Capacity Owners that have appointed a representative to the Committee shall be under no obligation (1) to create additional documentation, data, or information, (2) to provide documentation, data, or information that is not readily available to the Committee or to any Capacity Owner that has appointed a member to the Committee, (3) to provide to Bonneville documentation, data, or information that the Committee has previously provided to Bonneville; provided, further, that with regard to requests for documentation, data, and information pursuant to this subsection 13(f), (1) Bonneville must designate in such request the specific item in the Committee's recommendation to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information, and (2) Bonneville shall use reasonable efforts, consistent with Bonneville's needs as set forth in this subsection 13(f), to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to this subsection. Such single request shall be made of the Committee by delivering a copy of the request to each Capacity Owner that has appointed a representative to the Committee. The Committee shall have 20 days from the date of its receipt of Bonneville's request to provide a single response containing the documentation, data, and information requested.

- (g) If the Committee makes any recommendation in writing pursuant to subsection 13(e), Bonneville shall have the greater of 15 days from the date of receipt of the requested documentation, data, and information requested pursuant to subsection 13(f) or, if none was requested, 30 days from the date of receipt of the Committee's recommendations made pursuant to subsection 13(e) to, by written notice to each Capacity Owner that has appointed a representative to the Committee, accept the recommendation, accept the recommendation in part, reject the recommendation, or propose an action that is responsive to the Committee's recommendation and that is different from Bonneville's proposal contained in the Operating Plan. If Bonneville makes such a proposal, Bonneville shall set forth in such

written notice the exact revisions to the Operating Plan. The Committee shall have 7 days from the date of receipt of Bonneville's proposal to make any requests in writing for supporting documentation, data, and information as set forth in subsection 13(d). Bonneville shall have 7 days to respond to those requests as set forth in subsection 13(d). Failure of Bonneville to respond in writing to any recommendation of the Committee within the applicable time period set forth in this subsection 13(g) shall be deemed to constitute rejection of such recommendation.

- (h) If Bonneville rejects all or any portion of the Committee's recommendation, or if the Committee elects not to accept a proposal made by Bonneville pursuant to subsection 13(g), then the Committee may
  - (1) elect by written notice to Bonneville to refer to binding arbitration, pursuant to section 14 and consistent with subsections 13(i) and 14(b), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g); and
  - (2) elect by written notice to Bonneville to refer to nonbinding arbitration pursuant to section 15 and consistent with subsections 15(a) and 15(d), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g).

Failure of the Committee to elect to refer to arbitration

- (A) such portion of any recommendation of the Committee not accepted by Bonneville within 15 days following Bonneville's

rejection or acceptance in part of such recommendation of the Committee pursuant to subsection 13(g), or

- (B) any proposal made by Bonneville pursuant to subsection 13(g) within 15 days following Bonneville's written notice of such proposal or, if documentation, data, or information was requested by the Committee pursuant to subsection 13(g), within 15 days following receipt by the Committee of such documentation, data, or information pursuant to subsection 13(g),

shall be deemed to constitute acceptance by the Committee of Bonneville's rejection or acceptance in part of the recommendation of the Committee or of Bonneville's proposal and waiver by the Committee of any right pursuant to this section 13 or to section 15 to arbitrate such recommendation or portion thereof.

- (i) The Committee may, subject to the immediately succeeding sentence, arbitrate, pursuant to subsection 13(h), any recommendation by the Committee concerning a revision pursuant to this Agreement to a loss factor set forth in any Operating Plan or in any amendment to an Operating Plan or concerning any forecast cost or actual (allocated or otherwise) cost set forth in any Operating Plan or in any amendment to an Operating Plan (including the following costs and related items set forth in any Operating Plan, or in any amendment to an Operating Plan, pursuant to Exhibit I, Schedule A, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; Exhibit I, Schedule B, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; Exhibit I, Schedule C, lines 1, 2, 3, 4 and 5; Exhibit I, Schedule D, lines 3, 4, 5, 6, 7, 8, 9, 10 and 11; Exhibit I, Schedule E, lines 2 and 3; Exhibit I, Schedule F, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; Exhibit I, Schedule G, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; and Exhibit I, Schedule H, lines 1, 2, 3, and 4). The Committee's right pursuant to this subsection 13(i) to arbitrate any such recommendation shall be subject to the following limitations:

- (1) if such recommendation, or portion thereof, includes a Replacement Cost for a Replacement or a Reinforcement Cost for a Reinforcement, and such Replacement Cost or Reinforcement Cost was included in a previous Operating Plan (either of such costs, a Previous Operating Plan Cost), the Committee may arbitrate pursuant to this subsection 13(i) such recommendation, or portion thereof, only to the extent that such recommendation, or portion thereof, includes any Replacement Cost or Reinforcement Cost in excess of the Previous Operating Plan Cost;
- (2) the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, pertaining to a revision to a loss factor pursuant to this Agreement only to the extent such arbitration is permitted by subsection 10(b);
- (3) the Committee may arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning an Other Cost only to the extent that such Other Cost is a cost set forth in an Operating Plan or amendment to an Operating Plan pursuant to Exhibit I, Schedule E, line 2 and such recommendation, or portion thereof pertains to whether such Other Cost is properly allocated to Bonneville's PNW AC Intertie pursuant to Exhibit I, section V;
- (4) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in such Operating Plan or in any amendment to an Operating Plan, the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, concerning any

actual cost for any activity or project described in such Operating Plan only to the extent that such actual cost exceeds 105 percent of the forecast cost for such activity or such project, provided, however, that, without limiting any of Snohomish's rights and benefits pursuant to subsection 16(c), the Committee may not arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan or in any amendment to an Operating Plan if such actual cost is less than 105 percent of the forecast for such activity or such project;

- (5) the Committee may not arbitrate, pursuant to this subsection 13(i), (a) the allocation by Bonneville pursuant to this Agreement of any of its costs to overall overhead costs or to overall indirect costs, or (b) the allocation by Bonneville pursuant to this Agreement of a portion of Bonneville's overall overhead costs and overall indirect costs to its total system operations costs, its total system maintenance costs, its total capital costs or its total indirect and overhead power scheduling costs; provided, however, that nothing in this paragraph (5) shall be deemed to prevent or restrict the Committee from arbitrating pursuant to this subsection 13(i) the level (rather than the allocation) of any of Bonneville's Exhibit I, Schedule A, line 9 total system operations indirect costs and line 11 total system operations overhead costs; Bonneville's Exhibit I, Schedule B, line 11 total system maintenance indirect costs and line 13 total system maintenance overhead costs; Bonneville's total capital costs; Bonneville's Exhibit I, Schedule F, line 6 total indirect contracts and rates costs and Bonneville's Exhibit I, Schedule F, line 7 total overhead contracts and rates costs; or Bonneville's Exhibit I, Schedule G, line 6 total indirect power scheduling costs and Bonneville's Exhibit I, Schedule G, line 7 total overhead power scheduling costs;



- (6) the Committee may not arbitrate any recommendation, or any portion thereof, regarding any amendment to an Operating Plan made pursuant to sections 9(b)(2)(A)(iv) and 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2);
- (7) the Committee may not arbitrate any such recommendation, or portion thereof, to the extent that in doing so the arbitrators would be required to decide a matter of law in order to render a decision pursuant to subsection 14(h). If, subsequent to the Effective Date, Bonneville is given legal authority to submit to binding arbitration matters of law, Bonneville shall enter into good faith negotiations with Snohomish and Capacity Owners other than Snohomish regarding a revision to this paragraph 13(i)(7) enabling arbitration of matters of law pursuant to this subsection 13(i) consistent with legal authority; and
- (8) the Committee may not arbitrate any recommendation, or portion thereof, regarding an allocation of a Reinforcement Cost to the extent prohibited by subsection 7(d).

In arbitrating any recommendation, or portion thereof, pursuant to this subsection 13(i), the Committee may raise in support of such recommendation arguments regarding whether any forecast or actual cost should be based upon activities different in degree, but not in kind, from the activities upon which such forecast or actual cost in the Operating Plan is based.

- (j) Each Operating Plan provided pursuant to subsection 13(b) which has completed the Committee review process set forth in subsections 13(d) through 13(g) shall take effect on the first day of the fiscal year to which such Operating Plan pertains and shall remain in effect for the duration of such fiscal year.
- (k) At any time during the fiscal year in which an Operating Plan is in effect, or within 8 months after the end of such fiscal year, Bonneville may amend such Operating Plan, pursuant to subsections 13(l)

through 13(n), to reflect a different forecast or actual Operations Cost, Maintenance Cost, General Plant Cost, Other Cost, Contracts and Rates Cost, Power Scheduling Cost, or End of Term Cost in such Operating Plan. At any time during the fiscal year an Operating Plan is in effect, or within 30 months after a work order for a Replacement or Reinforcement is closed, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast cost or actual cost component for such Replacement or Reinforcement.

- (l) Any amendment made to any Operating Plan pursuant to subsection 13(k) shall be provided by delivery of a copy in writing of such amendment by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (m) Consideration of amendments to the Operating Plan pursuant to subsection 13(l) shall be consistent with the procedures set forth above in subsections 13(c) through 13(k), except that the time limits set forth in such subsections shall be reduced as follows: 15 days shall be 7 days, 20 days shall be 10 days, 30 days shall be 15 days, and 50 days shall be 25 days. For purposes of computing the time limits in this subsection 13(m), the date Bonneville provides the Capacity Owners with a proposed amendment, pursuant to subsection 13(k), shall be deemed to be the date the annual meeting was convened for purposes of paragraph 13(d)(1) and subsection 13(e).
- (n) Without limiting any of Snohomish's rights and benefits pursuant to subsection 13(i) and sections 14 and 15, any Operating Plan amended pursuant to section 9(b)(2)(A)(v) or 9(b)(2)(B)(iii), or subsection 13(k) shall take effect when such amendment is accepted by the Committee pursuant to subsection 13(e) or 13(h). Any Operating Plan amended pursuant to section 9(b)(2)(A)(iii), 9(b)(2)(A)(iv), 9(b)(2)(B)(i), or 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2) shall take effect as soon as such amendment is delivered by Bonneville to each Capacity Owner that has appointed a representative to the Committee.

- (o) An Operating Plan shall, during the fiscal year in which such Operating Plan is in effect, establish the costs which Snohomish is obligated to pay pursuant to the terms and conditions of this Agreement. In no event shall such Operating Plan, or any portion thereof, contain or constitute an obligation of Bonneville to undertake, or to expend funds on, activities described or indicated in such Operating Plan.

#### 14. **ARBITRATION**

- (a) During any arbitration process conducted pursuant to this section 14, Snohomish shall act through the Committee. Each of Bonneville and Snohomish agrees to be bound by any decision rendered by the arbitrators in any arbitration brought pursuant to subsection 13(i) and this section 14.
- (b) The Committee may initiate arbitration pursuant to subsection 13(i) by taking the following actions:
  - (1) an affirmative vote to initiate arbitration by at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  - (2) either of the following:
    - (a) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to subsection 13(i) within the applicable time period established in subsection 13(h); or
    - (b) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to

the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subsection 14(b) shall set forth in detail the matter or matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (c) Bonneville shall, within 10 Working Days after receipt of the notice by the Committee referred to in subsection 14(b), appoint a second arbitrator and provide by written notice to each Capacity Owner that has appointed a representative to the Committee the name, street address and telephone number of the arbitrator appointed by Bonneville. The two arbitrators appointed by the Committee and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville.
  - (1) If the arbitrators appointed by the Committee and by Bonneville, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville, then within 30 days after the date of the appointment of an arbitrator by Bonneville, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
  - (2) If Bonneville fails to appoint an arbitrator within 15 days after receipt of the notice by the Committee referred to in subsection 14(b), then within 30 days after the date of such notice, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
  - (3) If, pursuant to either paragraph 14(c)(1) or 14(c)(2), the Committee applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Committee shall give Bonneville

written notice of such application within 5 days after the date of filing such application.

- (d) The three arbitrators appointed pursuant to subsections 14(b) and 14(c) shall select by a majority vote an alternative pursuant to subsection 14(g).
  
- (e) Within 10 days after the appointment of a third arbitrator pursuant to subsection 14(c), the arbitrators shall establish a schedule for submission of written positions by Bonneville and Snohomish, respectively. The arbitrators must establish a schedule for such submissions pursuant to this subsection 14(e) that will allow the arbitration to be concluded, and the decision of the arbitrators rendered pursuant to subsection 14(g), within 120 days following the date of the appointment of the third arbitrator. A copy of any submission by the Committee to the arbitrators pursuant to this section 14 shall be simultaneously served by the Committee on Bonneville, and a copy of any submission by Bonneville to the arbitrators pursuant to this section 14 shall be simultaneously served by Bonneville on each Capacity Owner that has appointed a representative to the Committee. The Committee shall state, in a letter to the arbitrators, as its proposed alternative to each Bonneville proposal in dispute, the recommendation proposed by the Committee pursuant to subsection 13(g) and rejected in whole or in part by Bonneville pursuant to subsection 13(g). Bonneville shall state its position and proposed resolution of the dispute in a letter to the arbitrators. If Bonneville made a proposal in response to such recommendation of the Committee pursuant to subsection 13(g), then such position and proposed resolution shall set forth such proposal, or if Bonneville made no such proposal, then such position and proposed resolution shall set forth the relevant portion of the Operating Plan. If, however, the arbitration concerns an exception pursuant to paragraph 16(f)(3), then the positions and proposed resolutions of Bonneville and the Committee shall be as established pursuant to such subsection. The Committee may then submit a response to Bonneville's letter, and Bonneville may thereafter submit a reply to

the Committee's response. Bonneville and the Committee shall have an equal number of days to prepare and serve their replies.

- (f) No submission by either the Committee or Bonneville to the arbitrators pursuant to subsection 14(e) shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Committee or Bonneville, and for good cause shown, the arbitrators may permit any submission by such Party to exceed 50 pages.
- (g) The arbitrators shall select, as between the Committee's recommendation pursuant to subsection 13(e), on the one hand, and the portion of Bonneville's proposed Operating Plan to which the Committee's recommendation pertains or Bonneville's proposal pursuant to subsection 13(g) not accepted by the Committee, on the other, the alternative which
  - (1) is consistent with the provisions of this Agreement and
  - (2) (A) in conformity with the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto, would better achieve the desired result consistent with safety, reliability, and cost-benefit or (B) if there are no such generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area, would, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, be reasonably expected to better achieve the desired result consistent with safety, reliability, and cost-benefit.
- (h) In applying the standards set forth in subsection 14(g), the arbitrators shall take into consideration, among other things (a) that Bonneville and Snohomish each have responsibilities for service to customers within and without the Pacific Northwest region in accordance with applicable law, (b) that Bonneville and others jointly own the PNW AC Intertie and Bonneville owes contractual obligations to those

parties regarding the PNW AC Intertie, (c) that Bonneville must operate, as a practical matter, the PNW AC Intertie in coordination with the operation of the interconnected intertie facilities in California, and (d) that the PNW AC Intertie is a major import-export facility important to the service of loads in and out of the region.

- (i) In any arbitration pursuant to this section 14, the arbitrators shall choose, pursuant to subsection 14(g), only between the alternatives proposed by Bonneville and the Committee and shall have no authority to resolve such arbitration other than by selecting an alternative proposed by either Bonneville or the Committee.
- (j) Upon selection by the arbitrators of an alternative pursuant to subsection 14(g), then Bonneville shall amend the Operating Plan to cause it to conform to the decision of the arbitrators.
- (k) If the arbitrators have not made a selection of an alternative pursuant to subsection 14(i) before the date on which the Operating Plan becomes effective pursuant to subsection 13(j), then Snohomish shall make payments of annual charges pursuant to such Operating Plan. If the arbitrators subsequently select the Committee's alternative, then Bonneville shall, subsequent to amending such Operating Plan pursuant to subsection 14(j), refund to or bill Snohomish its pro rata share of the amount of the incremental difference between the costs set forth in such Operating Plan as amended pursuant to subsection 14(j) and 105 percent of the costs set forth in such Operating Plan, prior to its amendment pursuant to subsection 14(j), to the extent that such costs were incurred during the period from the first day of effectiveness of such Operating Plan pursuant to subsection 13(j) to the date of the arbitrators' decision, such refund to be made pursuant to subsection 9(f) and such payment to be made pursuant to subsection 9(b).
- (l) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 14 equal to  $1 / (n + 1)$ , where "n" equals the number of Capacity Owners.

The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay its own expenses related to the arbitration proceeding including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.

- (m) Any judgment rendered by a court of competent jurisdiction upon an award made by the arbitrators pursuant to this section 14 may be entered in any court having jurisdiction thereof.

## 15. NONBINDING ARBITRATION

- (a) The Initiating Party (as defined in paragraph 15(e)(1)) may, subject to the immediately succeeding sentence, elect by written notice to Responding Party (as defined in paragraph 15(e)(1)) to refer to nonbinding arbitration pursuant to the other provisions of this section 15 the following: (i) if the Initiating Party is the Committee, any recommendation by the Committee, or any portion thereof, concerning any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 and (ii) any other issue, dispute, or controversy regarding the Parties' respective rights and obligations pursuant to this Agreement. The Initiating Party's right pursuant to this subsection 15(a) to arbitrate any recommendation or any issue, dispute or controversy shall be subject to the following limitations:

- (1) the Initiating Party may not arbitrate pursuant to this subsection 15(a): (A) any recommendation with respect to an Operating Plan or any amendment to an Operating Plan or (B) any issue, dispute, or controversy, which recommendation, issue, dispute or controversy may be arbitrated pursuant to subsection 13(i) or 16(f);



- (2) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation not permitted to be arbitrated pursuant to paragraphs 13(i)(1), 13(i)(3), 13(i)(4), and 13(i)(8);
- (3) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning a loss factor or revision to a loss factor set forth in Exhibit E, Part A or Part B pursuant to this Agreement;
- (4) the Committee may not (but the Snohomish or Bonneville may) arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning any right or obligation of Snohomish pursuant to this Agreement that is not a right or obligation, as the case may be, of each other Capacity Owner under its respective Capacity Ownership Agreement; or
- (5) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operating Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs and forecast End of Term Costs set forth in such Operating Plan, the Committee may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 only to the extent that such actual cost exceeds 105 percent of the forecast for such activity or such

project; provided, however, that, without limiting any of Snohomish's rights and benefits pursuant to section 16(f), no Initiating Party may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 if such actual cost is less than 105 percent of the forecast for such activity or such project; and

- (6) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any issue, dispute, or controversy (A) concerning matters of ratemaking (for purposes of this subsection 15(a), the term "ratemaking" shall mean the determination of matters appropriately determined pursuant to section 7(i) of the Regional Act, including (i) Bonneville's revenue requirements (including without limitation Bonneville's depreciation and repayment standards and planned net revenues for risk, but excluding program level issues determined in the Federal budget process), (ii) Bonneville's cost of service analysis (including functionalization, segmentation, and allocation of costs contained in such analysis, but excluding any allocation of costs contemplated in Exhibit I), (iii) Bonneville's rate design, and (iv) any related environmental analysis of proposed rates; (B) concerning a final action of Bonneville, which final action is not itself performance of any obligation of Bonneville or Bonneville's Administrator under this Agreement; or (C) concerning, or requiring the decision of, a matter not arising under this Agreement or the other Capacity Ownership Agreements.

- (b) Except as otherwise provided in paragraph 15(a)(4), all arbitrations pursuant to this section 15 shall be between Bonneville and the Committee.
- (c) A copy of any submission (including, without limitation, any statement of position or any brief) by the Initiating Party or the Responding Party to the arbitrators pursuant to this section 15 shall be simultaneously served by such party on the Responding Party or Initiating Party, respectively. No submission by either the Initiating Party or the Responding Party to the arbitrators shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Initiating Party or the Responding Party, and for good cause shown, the arbitrators may permit any submission by such party to exceed 50 pages.
- (d) With respect to any arbitration pursuant to this section 15 of any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) Only the Committee may initiate arbitration with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7. The Committee may initiate nonbinding arbitration pursuant to this section 15 by taking the following actions:
- (A) an affirmative vote to initiate arbitration pursuant to this section 15 by the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and

- (B) either of the following:
- (i) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to this section 15 within the applicable time period set forth in subsection 13(h); or
  - (ii) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subparagraph 15(d)(1)(B) shall (x) indicate that such vote has been taken and (y) set forth in detail the matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (2) The respective rights and obligations of the Committee and of Bonneville with respect to arbitration pursuant to this subsection 15(d), unless otherwise provided in this subsection 15(d), shall be as set forth in subsections 14(d) through 14(l).
- (e) With respect to any arbitration pursuant to this section 15 of any issue, dispute, or controversy other than with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) The party (which term, for purposes of this subsection 15(e), shall refer to Bonneville, on the one hand, and to the

Committee or Snohomish, on the other) initiating arbitration (Initiating Party) shall initiate arbitration pursuant to this section 15 by serving written notice on the other party (Responding Party) of its initiation of arbitration. If the Committee is the party initiating arbitration, the Committee, in addition to serving such notice, shall initiate such arbitration by an affirmative vote to do so of at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one. The Committee shall indicate that such vote has been taken in such notice to Bonneville. Any such notice by an Initiating Party shall set forth in detail the following: (A) the issue, dispute, or controversy to be arbitrated and the Initiating Party's position regarding such issue, dispute, or controversy; (B) the relief sought by the Initiating Party; and (C) the name, street address, and telephone number of the arbitrator appointed by the Initiating Party. The Responding Party shall, within 15 days after receipt of the notice by the Initiating Party referred to in this subsection 15(e), appoint a second arbitrator and provide written notice to the Initiating Party and to the arbitrator appointed by the Initiating Party of the name, street address and telephone number of the arbitrator appointed by the Responding Party. The arbitrators appointed by the Initiating Party and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party.

- (A) If the arbitrators appointed by the Initiating Party and by the Responding Party, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party, then within 30 days after the date of the appointment of an arbitrator by the Responding Party the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.

- (B) If the Responding Party fails to appoint an arbitrator within 15 days after receipt of the notice by the Initiating Party referred to in paragraph 15(e)(1), then within 30 days after the date of such notice the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
- (C) If, pursuant to either subparagraph 15(e)(1)(A) or 15(e)(1)(B), the Initiating Party applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Initiating Party shall give the Responding Party written notice of such application within one day after the date of filing such application.
- (2) The three arbitrators appointed pursuant to paragraph 15(e)(1) shall decide any issue, dispute, or controversy by majority vote.
- (3) Within 20 days after the appointment of a third arbitrator pursuant to paragraph 15(e)(1) with respect to any arbitration pursuant to this subsection 15(e), the arbitrators shall establish a schedule for the completion of such arbitration. The first day pursuant to such schedule shall be hereafter referred to in this subsection 15(e) as the "Arbitration Commencement Date."
- (4) No later than 15 days after the Arbitration Commencement Date, the Initiating Party may make a single request in writing to the Responding Party for documentation, data, and information relevant to or reasonably necessary to support the Initiating Party's position communicated to the Responding Party pursuant to paragraph 15(e)(1). Such single request may contain multiple parts. The Initiating Party shall use reasonable efforts to minimize and limit the scope and number

of parts of the request for documentation, data, and information pursuant to this paragraph.

- (5) The Responding Party shall have 20 days from the date it receives the request from the Initiating Party pursuant to paragraph 15(e)(4) to provide the documentation, data, and information requested; provided, however, that the Responding Party shall be under no obligation pursuant to this paragraph 15(e)(5) (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Initiating Party or (D) if Bonneville is the Responding Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.
- (6) No later than 15 days after the Arbitration Commencement Date, the Responding Party may make a single request in writing to the Initiating Party for documentation, data and information relevant to Initiating Party's position communicated to the Responding Party pursuant to subsection 15(e)(4). Such single request may contain multiple parts. The Responding Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data and information pursuant to this paragraph.
- (7) The Initiating Party shall have 20 days from the date it receives the request from the Responding Party pursuant to paragraph 15(e)(6) to provide the documentation, data and

information requested; provided, however, that the Initiating Party shall be under no obligation pursuant to this paragraph 15(e)(7) (A) to create additional documentation, data, or information, (B) to provide documentation, data or information that is not readily available to it, (C) to provide to the Responding Party documentation, data, or information that the Initiating Party has previously provided to the Responding Party or (D) if Bonneville is the Initiating Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (8) For purposes of this subsection 15(e), each of the Initiating Party and the Responding Party shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests by it for, documentation, data, and information and responses to such requests.
- (9) Within 65 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may state in reasonable detail its position regarding any issue, dispute or controversy to be arbitrated pursuant to this subsection 15(e) in a letter to the arbitrators and to the other party to the arbitration of such issue, dispute, or controversy. Within 85 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may submit a letter to the arbitrators and to the other party responding to the letter that the other submitted to the arbitrators pursuant to the immediately preceding sentence.
- (10) The arbitrators shall resolve any issue, dispute, or controversy pursuant to this subsection 15(e) by deciding (taking into



consideration, among other things, any letter submitted by the Initiating Party or the Responding Party with respect to such issue, dispute, or controversy) whether the position of the Initiating Party or the position of the Responding Party regarding the action taken or proposed to be taken by the Responding Party conforms more closely with the standard for such action set forth in this Agreement. The arbitrators shall have no authority to fashion a resolution of such arbitration other than pursuant to this paragraph 15(e)(10).

- (f) Any selection by the arbitrators of an alternative pursuant to subsection 15(d) and any decision by the arbitrators pursuant to subsection 15(e) shall be reported by the Initiating Party to the Bonneville Administrator (Administrator) for review within 30 days after such selection or decision is made. The Administrator shall either accept or reject in writing such selection or decision. If the Administrator fails to either accept or reject such selection or decision, as the case may be, within 90 days after such selection or decision is made, such selection or decision, as the case may be, shall be deemed to be accepted by the Administrator.
- (g) If the Administrator accepts any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e), such selection or decision shall become binding upon Snohomish and Bonneville at the time of its acceptance.
- (h) The Administrator may reject any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e) only for one or more of the following reasons:
  - (1) the arbitrators did not follow the arbitration procedures set forth in this section 15;

- (2) the arbitrators decided a matter that is not a matter arising under this Agreement as set forth in paragraph 15(a)(6);
  - (3) the arbitrators did not completely apply the appropriate standard for arbitration pursuant to this section 15;
  - (4) the arbitrators granted relief in contravention of this Agreement;
  - (5) the arbitrators' decision is not supported by substantial, competent evidence; or
  - (6) implementation of the arbitrators' decision would cause Bonneville to violate a statutory obligation of Bonneville's or would cause Bonneville to breach a contractual obligation not in contravention of this Agreement.
- (i) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 15 equal to  $1 + (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay for its own expenses related to the arbitration proceeding, including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
- (j) If the Initiating Party elects to arbitrate any issue, dispute, or controversy pursuant to this section 15, the Initiating Party must initiate arbitration of such issue, dispute, or controversy within one year following the occurrence of the event giving rise to such issue, dispute, or controversy. Failure of the Initiating Party to initiate arbitration of any such issue, dispute, or controversy within such one-year period shall constitute a waiver of the Initiating Party's right to arbitrate such issue, dispute, or controversy pursuant to this section 15.

16. **AUDIT RIGHTS**

- (a) The Committee shall have the right to perform an audit of Bonneville's books, records, and documents used in or relating to the determination of the Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to the Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(2)(B).
- (b) The Committee shall have the right to perform an audit of Bonneville's books, records and documents used in or relating to the determination of any Revised Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to any Revised Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(3)(B).
- (c) The Committee shall have the right to audit Bonneville's books, records, and documents (i) used in or relating to the determination of any charge (including, without limitation, any MFU count made pursuant to section I.A of Exhibit I) billed to Snohomish pursuant to paragraph 9(b)(2) and subsection 9(c), or (ii) used in or relating to any billing or refund with respect to any such charge. Such audit shall be performed within 36 months after the date of Bonneville's bill or refund voucher for such charge rendered by Bonneville to Snohomish pursuant to paragraph 9(b)(2) or subsection 9(c), as the case may be.
- (d) Bonneville shall not be responsible to pay any of the expenses incurred by any of the Capacity Owners in performing any audit pursuant to this section 16. Bonneville shall not directly charge Snohomish or any Capacity Owner other than Snohomish for Bonneville's costs incurred by Bonneville with respect to any audit pursuant to this section 16 unless Bonneville develops a general practice of charging, through direct charges, each of its customers for

such costs incurred by Bonneville in connection with audits undertaken pursuant to those customers' respective contracts with Bonneville.

- (e) After completing any audit specified above, the Committee shall promptly provide to Bonneville a written report of the results of such audit. If such audit report includes any exception taken as a result of such audit and Bonneville agrees with such exception, Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such audit exception,
  - (1) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Snohomish a revised bill or refund voucher pursuant to paragraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
  - (2) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and either (A) render to Snohomish a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (B) cause to be refunded to Snohomish as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Snohomish's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this subsection 16(e) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such audit report is received by Bonneville to (but excluding) the date on which such amount is refunded to Snohomish.

- (f) If an audit report provided to Bonneville by Snohomish pursuant to subsection 16(e) includes any exception taken as a result of such audit and Bonneville does not agree with such exception, then the following shall apply:
- (1) Bonneville may, within 30 days following its receipt of such audit report, propose to the Committee a resolution of any inconsistency noted in any exception taken as a result of such audit;
  - (2) If the Committee accepts such resolution proposed by Bonneville, then Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such resolution,
    - (A) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to Snohomish a revised bill or refund voucher pursuant to subparagraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
    - (B) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and shall either (i) render to Snohomish a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (ii) cause to be refunded to Snohomish as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by Snohomish's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this paragraph 16(f)(2) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such resolution is accepted by the Committee to (but excluding) the date on which such amount is refunded to Snohomish; and

- (3) If the Committee does not accept such resolution, if any, proposed by Bonneville with respect to any such exception, or if Bonneville does not propose any such resolution, then the Committee
  - (A) shall have the right to arbitrate, pursuant to section 14, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to subsection 13(i); and
  - (B) shall have the right to arbitrate, pursuant to section 15, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to section 15.

The Committee must refer to arbitration pursuant to subparagraph 16(f)(3)(A) or 16(f)(3)(B) any cost to which exception is taken as a result of any audit within eight months after the date the Committee commences such audit. Failure of the Committee to elect to so refer to arbitration any cost within such eight-month period shall be deemed to constitute waiver by the Committee of any right pursuant to this section 16 to arbitrate such cost.

- (g) Snohomish shall have the right to participate in any audit pursuant to this section 16 only by acting through the Committee. If Snohomish chooses not to participate in any audit undertaken by the Committee, then Snohomish shall accept the findings of the Committee with respect to such audit and any resolution by the Committee and

Bonneville of any inconsistency noted in any exception taken as a result of such audit.

- (h) Any audits undertaken by the Committee shall be upon reasonable notice to Bonneville and at reasonable times and shall commence no more frequently than once in any 24 consecutive months. The audit rights provided in this section shall not be construed to permit a general audit of Bonneville's books, records, and documents. Audits shall be in conformance with generally accepted auditing standards. Prior to and for the duration of any audit, Bonneville shall retain all pertinent books, records, and documents prepared in the normal course of business. After commencement of an audit pursuant to subsection 16(a), 16(b), or 16(c), the Committee may request and Bonneville shall promptly provide reasonably available supporting documentation for any cost or charge subject to audit. If the Committee fails to commence an audit pursuant to subsection 16(a), 16(b), or 16(c) within the time periods set forth in subsection 16(a), 16(b), or 16(c), such failure shall constitute waiver by Snohomish of any right pursuant to this section 16 to arbitrate any charge or refund billed or refunded by Bonneville.
- (i) If Snohomish is operating pursuant to paragraph 3(b)(1), Bonneville shall have the right, at its own expense, to review Snohomish's books, records, and documents that directly pertain to the revenue reportable in Snohomish's accounting system where revenues received for wheeling for other entities would be booked for the purpose of verifying compliance with paragraph 3(b)(1). Bonneville shall have the right to perform such audit no more frequently than once every 36 months.

17. **PROTECTED AREAS**

Snohomish shall not use its Scheduling Share for transmission of power on the PNW AC Intertie from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by Bonneville unless Snohomish is required by regulatory authority to purchase

or provide transmission for the output of such project or unless Bonneville receives sufficient demonstration that a particular project would provide benefits to Bonneville's existing or planned fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program. The Parties agree that System Sales shall not be taken into consideration in any determination of whether Snohomish has used its Scheduling Share for transmission of power on the PNW AC Intertie from the hydroelectric projects referred to in the immediately preceding sentence. For purposes of this section 17, "System Sale" means any sale of power or energy to Snohomish or by a seller of power or energy, which power or energy is not resource-specific and is delivered to Snohomish at a point that connects one or more resources or transmission systems.

**18. ESTABLISHMENT AND MAINTENANCE OF RATES AND RELIEF FROM REGULATORY ACTION**

- (a) Bonneville shall use good faith efforts to maintain in effect such of the following rates that has been approved by FERC on an interim or final basis, during the rate approval period established by FERC for such rate:
- (1) any rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date;
  - (2) the Initial Successor Rate;
  - (3) the Alternative Successor Rate; and
  - (4) the Bonneville Successor Rate.
- (b) If Bonneville's Administrator submits to FERC a rate that is different from that set forth in Exhibit B, Part A and Part B, on the Effective Date, as the first rate proposed by Bonneville (Initial Successor Rate) to replace the AC-93 rate set forth in Exhibit A or that is for a rate approval period which is less than the remainder of the Term following the expiration of the AC-93 rate, Snohomish may, within 90



days after Bonneville submits the Initial Successor Rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:

- (1) Snohomish may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
- (2) Snohomish may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Snohomish to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:

- (A) This Agreement shall terminate upon the date Bonneville receives Snohomish's notification to terminate this Agreement pursuant to this subsection 18(b) except for those rights and obligations set forth in this paragraph 18(b)(2).
- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Snohomish has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Snohomish's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + I = \text{Refunded Lump Sum Payment}$$

where:

- A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Snohomish to Bonneville pursuant to subsection 9(a).
- B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(b).
- 540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.
- I = Interest on  $A - ((B/540) \times A)$ , accruing from (and including) the date of Bonneville's receipt of Snohomish's Initial Lump Sum Payment to (but excluding) the date on which Bonneville receives Snohomish' notification to terminate this Agreement pursuant to this subsection 18(a), at the 5-year Treasury note rate in effect on the date on which Bonneville receives Snohomish's Initial Lump Sum Payment.
- (C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(b)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(b)(2)(B).

- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(b)(2)(B), Bonneville may accelerate payment to Snohomish of the amount of the Refunded Lump Sum Payment.

If Snohomish elects to proceed under this paragraph 18(b)(2), Bonneville shall not develop a rate or charge that would inequitably allocate to Snohomish and Capacity Owners other than Snohomish, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Snohomish or any Capacity Owner other than Snohomish.

- (c) If FERC approves the Initial Successor Rate, the Alternative Successor Rate (as defined in subsection 18(d)), or the Bonneville Successor Rate (as defined in subsection 18(d)) for a term less than the remainder of the Term following the expiration of the AC-93 rate, and if Bonneville's Administrator thereafter submits to FERC a rate (Replacement Rate) that is different from the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis) or that is for a rate approval period which is less than the remainder of the Term following the expiration of the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis), Snohomish may, within 90 days after Bonneville submits such rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:

- (1) Snohomish may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
- (2) Snohomish may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Snohomish to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:

- (A) This Agreement shall terminate upon the date Bonneville receives Snohomish's notification to terminate this Agreement pursuant to this subsection 18(c) except for those rights and obligations set forth in this paragraph 18(c)(2).
- (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after Snohomish has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of Snohomish's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + R = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Snohomish to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement.

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

R = 2.5 times the amount paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the immediately preceding fiscal year times the ratio of (a) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the first fiscal year during the proposed rate approval period pursuant to the rate submitted by Bonneville to FERC to replace the immediately preceding annual costs rate over (b) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the same fiscal year were the immediately preceding annual costs rate to remain in effect; provided, however, that the ratio of (a) over (b) shall in no event be less than one for purposes of this subsection.

(C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(c)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(c)(2)(B).

- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(c)(2)(B), Bonneville may accelerate payment to Snohomish of the amount of Refunded Lump Sum Payment.

If Snohomish elects to proceed under this paragraph 18(c)(2), Bonneville shall not develop a special rate or charge that would inequitably allocate to Snohomish and Capacity Owners other than Snohomish, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from Snohomish or any Capacity Owner other than Snohomish.

The terms of this subsection 18(c) shall be effective through December 31, 2040.

- (d) If (i) FERC remands or approves a rate which materially differs from the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, or (ii) FERC grants final approval to a rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date, or to the Initial Successor Rate for a rate approval period of less than the remainder of the Term following the expiration of the AC-93 rate, or (iii) FERC remands or disapproves the Initial Successor Rate, then in any such event Bonneville, Snohomish, and Capacity Owners other than Snohomish shall use good faith efforts to develop an alternative successor rate (Alternative Successor Rate) which would place Snohomish in substantially the same position with respect to Snohomish's rights and obligations under this Agreement as if the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, had been approved by FERC for the remainder of the Term following the

expiration of the AC-93 rate. Bonneville, Snohomish, and Capacity Owners other than Snohomish shall use good faith efforts to reach agreement on an Alternative Successor Rate within 6 months after the date of the FERC order regarding the Initial Successor Rate contemplated in this subsection 18(d) or within the time period established in such FERC order, whichever is earlier.

- (1) If Bonneville, Snohomish, and Capacity Owners other than Snohomish reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, then Bonneville shall, subject to section 7(i) of the Regional Act, submit such Alternative Successor Rate to FERC for approval and confirmation.
- (2) If Bonneville, Snohomish, and Capacity Owners other than Snohomish do not reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, Bonneville shall develop a rate, which, among other things, in Bonneville's judgment, protects the rights and obligations of Snohomish and Capacity Owners other than Snohomish and, subject to section 7(i) of the Regional Act, shall submit such rate (Bonneville Successor Rate) to FERC for approval and confirmation.

Nothing in this subsection 18(d) shall limit or otherwise affect any provisions of subsection 18(b) or 18(c).

- (e) If Bonneville, Snohomish, and Capacity Owners other than Snohomish are unable to agree upon an Alternative Successor Rate pursuant to subsection 18(d), or if FERC approves the Alternative Successor Rate for a period of less than 15 years or with terms and conditions that differ from the terms and conditions of the Alternative Successor Rate, or if FERC remands the Alternative Successor Rate, or if FERC approves the Bonneville Successor Rate, Snohomish may elect, within 6 months of any of the foregoing events, to terminate this

Agreement and execute a long-term contract with Bonneville for firm wheeling on the PNW-PSW Intertie for a term not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Snohomish's Capacity Ownership Share, pursuant to subsection 18(f).

- (f) Should Snohomish elect to proceed pursuant to paragraph 18(b)(1) or 18(c)(1) or subsection 18(e), the Parties shall take the following steps:
- (1) Snohomish shall provide Bonneville with written notification of its election to terminate this Agreement and with a written request for a long-term contract for firm wheeling on the PNW-PSW Intertie for a period not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to Snohomish's Capacity Ownership Share.
  - (2) As soon as practicable after receipt by Bonneville of the written notice sent pursuant to paragraph 18(f)(1), Bonneville shall offer to Snohomish a long-term contract for firm wheeling on the PNW-PSW Intertie of an amount of power equal to the amount of power specified in Snohomish's written request pursuant to paragraph 18(f)(1), such offered contract to contain other terms and conditions substantially similar to those then being offered by Bonneville to its other firm wheeling customers for transactions on the PNW-PSW Intertie.

The termination date of this Agreement shall be the same date as the effective date of the long-term contract for firm wheeling referred to in this paragraph 18(f)(2), and such date shall in any event be no more than 6 months after Bonneville's receipt of Snohomish's notification pursuant to paragraph 18(f)(1).

- (3) The long-term contract for firm wheeling offered to Snohomish pursuant to paragraph 18(f)(2) shall also contain provisions which:



- (A) Require Bonneville to credit or pay (any such payment to be made pursuant to paragraph 9(f)(4)), in equal monthly amounts during the term of such long-term contract for firm wheeling, against the amount payable by Snohomish to Bonneville pursuant to such long-term wheeling agreement an amount equal to the "Credited Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) = \text{Credited Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by Snohomish to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(e).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

- (B) Require Bonneville, subject to the immediately succeeding sentence, to credit or pay interest on the Credited Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest to be credited or paid pursuant to this provision shall be credited or paid by Bonneville on the amount of each

monthly amount of the Credited Lump Sum Payment to be credited or paid by Bonneville pursuant to the provision set forth in subparagraph 18(f)(3)(A).

- (C) Permit Bonneville to accelerate payment to Snohomish of the amount of Credited Lump Sum Payment which remains uncredited at any time during the term of such long-term contract for firm wheeling.
  
- (g) Snohomish's right to terminate this Agreement pursuant to subsections 18(d) through 18(f) is a one-time only right that must be exercised after FERC action pursuant to subsection 18(d). If Snohomish fails to terminate the Agreement pursuant to subsection 18(e) as prescribed therein as a result of FERC action, Snohomish shall have no future rights to terminate the Agreement under this section 18 as a result of FERC action.
  
- (h) Bonneville shall use best efforts to establish and maintain in effect the AC-93 rate, set forth in Exhibit A, during the remainder of the Term, but only until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), that is confirmed and approved by FERC on an interim or final basis, becomes effective. If FERC does not confirm and approve on a final basis the AC-93 rate for a rate approval period of sufficient duration so that the AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or such other rate, becomes effective, then upon expiration of the rate approval period of such AC-93 rate, Bonneville shall submit to FERC a rate based on the methodology used to determine the AC-93 rate (revised AC-93 rate) and shall use best efforts to obtain a rate approval period for the revised AC-93 rate of sufficient duration so that the revised AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), becomes effective. If, at any time during the Term, FERC does not confirm and approve on an interim or final basis the AC-93 rate or revised AC-93 rate for any reason other than the duration of the rate approval period,

Bonneville and Snohomish shall use best efforts to develop a rate that would replace the AC-93 rate or revised AC-93 rate, and Bonneville shall submit such rate to FERC, pursuant to section 7(i) of the Regional Act, for confirmation and approval if such rate is agreed to by Bonneville, Snohomish and Capacity Owners other than Snohomish. If Bonneville and Snohomish do not succeed in developing such rate, Bonneville shall submit to FERC, pursuant to section 7(i) of the Regional Act, a rate which in Bonneville's judgment recovers Bonneville's costs. Bonneville shall bill Snohomish, and Snohomish shall pay Bonneville, in accordance with the AC-93 rate or, if FERC does not confirm and approve on an interim or final basis the AC-93 rate, the rate confirmed and approved by FERC on an interim or final basis. Bonneville shall revise Exhibit A so that it contains, at a given time, the AC-93 or other rate confirmed and approved by FERC on an interim or final basis.

19. **EXHIBITS**

- (a) Exhibits A through J attached to this Agreement are by this reference made a part of this Agreement. In the event of a conflict between any provision in Exhibits A through J and the provisions of sections 1 through 23 of this Agreement, the provisions of sections 1 through 23 of this Agreement shall prevail.
- (b) Bonneville shall revise Exhibit A pursuant to subsections 18(g) and 18(h) and this subsection 19(b). The rate schedules attached hereto as Exhibit A have been conditionally or finally confirmed by FERC. If the final rate schedules which are approved by FERC are an amendment or modification of the initial rate schedules, the applicable amended or modified rate schedules and associated GTRSPs shall be attached to and made part of this Agreement effective as of the date specified in FERC's approval. The rate schedules and GTRSPs included in Exhibit A shall be replaced by successor rate schedules and provisions in accordance with the provisions of section 7(i) of the Regional Act and FERC rules.

- (c) Upon interim or final approval by FERC of any rate submitted to FERC pursuant to subsections 18(a) through 18(g), Bonneville shall revise Exhibit B so that Exhibit B contains such rate approved by FERC as contemplated in this subsection 19(c). For purposes of this Agreement, such rate shall be effective as of the date of effectiveness specified in FERC's approval of such rate. Subject to the provisions of subsections 18(a) through 18(g), the rate schedule set forth in Exhibit B, Part A and Part B, on the Effective Date, shall be replaced by successor rate schedules and provisions pursuant to section 7(i) of the Northwest Power Act and applicable FERC rules.
- (d) Bonneville shall revise or modify Exhibit C from time to time to reflect changes hereafter agreed to in writing by the Parties in Snohomish's Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share.
- (e) Bonneville shall revise Exhibit D pursuant to subsection 9(a). Revision or modification of Exhibit D shall not require an executed amendment or revision to this Agreement.
- (f) Not more frequently than annually, Bonneville shall review and, as appropriate, revise Exhibit E, Part A, in accordance with Bonneville's standard methodology and formula for calculation of average losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie. Such methodology and formula are intended to forecast average annual actual losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie Operational Transfer Capability. Any changes to the loss methodology or formula, other than numerical values, shall be made only after consultation with the Committee. During such consultation, Bonneville shall provide to the Committee material pertinent to such changes to the loss methodology or formula. Upon conclusion of any review of the loss factor in Exhibit E, Part A, Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan pursuant to section 13. If the Committee pursues arbitration pursuant to subsection 10(b) and

section 14, Bonneville shall revise Exhibit E, Part A, to reflect the selection of the arbitrators pursuant to subsection 14(j).

- (g) Bonneville shall revise the loss factor in Exhibit E, Part B, as necessary to equal the same factor for average losses as Bonneville generally applies to transmission over Bonneville's share of the PNW-PSW Intertie. Revision of Exhibit E, Part B, shall not require an executed amendment or revision to this Agreement.
- (h) Bonneville shall revise Exhibit F as appropriate to reflect the facilities in Bonneville's PNW AC Intertie. Revision or modification of Exhibit F shall not require an executed amendment or revision to this Agreement.
- (i) Bonneville shall revise Exhibit G as appropriate to reflect the complete list of all of the Capacity Owners and their respective Capacity Ownership Shares and Capacity Ownership Percentages from time to time pursuant to this Agreement.
- (j) Bonneville shall revise Exhibit H as appropriate to reflect all provisions required by statute or Executive Order. Revision or modification of Exhibit H shall not require an executed amendment or revision to this Agreement.
- (k) Bonneville shall revise Exhibit I to reflect changes as agreed to in writing by Snohomish and Capacity Owners other than Snohomish.
- (l) Bonneville shall revise Exhibit J as mutually agreed to in writing by the Parties.

## 20. RULES OF LAW

- (a) Bonneville and Snohomish agree that each fully participated in the drafting of each provision of this Agreement. The rule of law interpreting ambiguities against the drafting Party shall not be

applicable to or utilized in resolving any dispute over the meaning or intent of this Agreement or any of its provisions.

- (b) This Agreement shall not be construed to establish a partnership, association, agency relationship, joint venture, or trust. Neither Party shall be under the control of or shall be or represent itself as, the agent of, or have a right or power to bind, the other Party without the other's express written consent, except as provided in this Agreement.
- (c) All applicable law is incorporated in and made part of this Agreement.

## 21. NOTICES

- (a) Unless the Agreement requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be served, given, or made if delivered in person or sent by acknowledged delivery, or sent by registered or certified mail, postage prepaid, to the persons addressed as set forth below:

To Bonneville:

Group Vice President for Marketing, Conservation and Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232

To Puget:

Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515

To Seattle:

Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101

To PNGC:

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232

To Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201

To Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411

- (b) Either Party may, by written notice to the other Party pursuant to subsection 21(a), change the address set forth in subsection 21(a) for the notifying Party.
- (c) All notices pursuant to this Agreement shall be effective on the date of receipt.

22. **WAIVER**

Any waiver at any time by a Party of its rights with respect to any matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent or other matter. Except as otherwise provided herein or as agreed in writing by the Parties, no provision in this Agreement may be waived except as documented or confirmed in writing.

23. **MISCELLANEOUS**

(a) **Effect of Section Headings**

Section headings and subheadings appearing in this Agreement are inserted for convenience only and shall not be construed as interpretations of provisions of this Agreement.

(b) **Amendments**

Except as may be expressly otherwise provided in this Agreement, this Agreement may be amended only with the express written consent of both of the Parties, and no provision of this Agreement shall be varied or contradicted by any oral agreement, course of dealing or performance or any other matter not hereafter set forth in a written agreement signed by both of the Parties.

(c) **Entire Agreement**

This Agreement constitutes, on and as of the date hereof, the entire agreement of the Parties with respect to the subject matter of this Agreement, and all prior understandings or agreements, whether written or oral, between the Parties with respect to the subject matter of this Agreement are hereby superseded in their entireties.



(d) **No Third Party Beneficiaries**

There are no third party beneficiaries of this Agreement. This Agreement shall not be construed to create rights in, or to grant remedies to, any third party as a beneficiary of this Agreement or of any duty, obligation, or undertaking established herein.

(e) **Regulatory Approvals**

Each Party shall use its best efforts to obtain and maintain in effect regulatory approvals that are necessary to permit such Party to perform its obligations under this Agreement in accordance with its terms and conditions. Neither Party shall oppose in any way or seek to alter or amend the terms and conditions of this Agreement by application to or participation in any application of any regulatory authority or court having jurisdiction. Snohomish shall not oppose in any way or seek to alter or amend the terms or conditions of the annual costs rate set forth in Exhibit B, the CO-94 rate, the AC-93 rate, or any rate described in section 18 that is agreed to by the Parties subsequent to each entering into this Agreement, in any proceeding pursuant to section 7 of the Pacific Northwest Electric Power Planning and Conservation Act before FERC or in any court of competent jurisdiction.

(f) **Other Capacity Ownership Agreements**

If Bonneville offers to enter into (i) a Capacity Ownership Agreement with any other Capacity Owner or (ii) any written amendment of any Capacity Ownership Agreement (other than this Agreement), then Bonneville shall offer to Snohomish an amendment of this Agreement that contains the terms and conditions of such Capacity Ownership Agreement with such other Capacity Owner or of such written amendment, as the case may be. Bonneville shall advise, and use reasonable efforts to consult with, Snohomish during the development or consideration of any offer to any Capacity Owner other than

Snohomish to enter into a Capacity Ownership Agreement or any amendment of such agreement.

(g) **Singular and Plural Forms**

For purposes of interpreting and construing this Agreement, the singular form of a word shall include its plural and the plural form of a word shall include its singular, unless otherwise expressly provided by this Agreement.

(h) **Performance Pending Dispute**

Except as otherwise expressly provided in this Agreement, pending resolution of any dispute, issue, or controversy arising under this Agreement, the Parties shall each continue performance of their respective obligations pursuant to this Agreement.

(i) **Time Periods**

For purposes of calculating any time period prescribed by this Agreement, if the last day of the time period falls on a day that is not a Working Day, then the last day of the time period shall be the first Working Day following such day as would otherwise be the last day of the time period.

(j) **Double Counting**

In developing rates or charges under section 7 of the Pacific Northwest Electric Power Planning and Conservation Act for any rate period, Bonneville shall not set rates or charges that recover, more than once, the costs associated with capital projects that are paid or forecast to be paid under the CO-94 rate and the AC-93 rate and annual costs rate set forth in Exhibit B, or the remaining Bonneville's PNW AC Intertie costs forecast to be paid under the AC-93 rate and annual costs rate set forth in Exhibit B. Bonneville's forecast of revenues chargeable under the CO-94 rate, AC-93 rate, and annual costs rate

set forth in Exhibit B shall be based on the best available information, including information provided pursuant to section 13 of this Agreement.

In the event Bonneville proposes any wheeling rate for transmission service on Bonneville's main grid that includes costs of the PNW AC Intertie, such proposed rate shall include a credit or other mechanism that ensures that Snohomish is not charged any of the PNW AC Intertie costs for deliveries of power that utilize up to the Snohomish's Capacity Ownership Share, as that term is defined in this Agreement.

(k) **Committee Action**

Each of the Parties agrees that to the extent it is provided in sections 13, 14, and 16 that the Committee shall take any action or shall make any decision, such action or decision shall be taken or made, as the case may be, by the Committee, and not by Snohomish acting individually.

(l) **Fiscal Year**

For purposes of this Agreement, the term "fiscal year" shall mean Bonneville's fiscal year.

(m) **Rights and Remedies Cumulative**

All rights and remedies of either Party under this Agreement and at law and in equity shall be cumulative and not mutually exclusive and the exercise of one right or remedy shall not be deemed a waiver of any other right or remedy. Nothing contained in any provision of this Agreement shall be construed to limit or exclude any right or remedy of either Party (arising on account of the breach or default by the other Party or otherwise) now or hereafter existing under any other provision of this Agreement, at law or in equity.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

/s/ WALTER E. POLLOCK  
Group Vice President for Marketing  
Conservation and Production

By Walter E. Pollock  
Group Vice President for Marketing,  
Conservation and Production

Name Walter E. Pollock  
(Print/Type)

September 27, 1994

Date September 27, 1994

Public Utility District No. 1 of Snohomish County

By John F. Spencer  
Name John Spencer  
(Print/Type)

/s/ JOHN F. SPENCER

Title General Manager

General Manager

Date 9/23/94

September 23, 1994

Effective Date September 27, 1994

Exhibit A, Page 1 of 1  
Contract No. DE-MS79-94BP94525  
Public Utility District No. 1 of Snohomish County  
Effective on the Effective Date

**CO-94, AC-93, IS-93 Rate Schedules and General Transmission  
Rate Schedule Provisions**

Schedule CO-94  
CAPACITY OWNERSHIP RATE SCHEDULE

**Section I. Availability**

This schedule applies to all agreements which provide life-of-facilities capacity rights to non-Federal participants (Capacity Owners) in 725 MW of Bonneville's PNW AC Intertie and any upgrades thereto. Service under this schedule is subject to Bonneville's General Transmission Rate Schedule Provisions.

**Section II. Rate**

The charge for capital and related costs for non-Federal capacity ownership in Bonneville's PNW AC Intertie shall be determined by the methodologies set out in Section III below.

**Section III. Determination of Rate**

**A. Capacity Ownership Price**

The charge for capacity ownership in Bonneville's PNW AC Intertie shall be the Capacity Ownership Share of the actual capital and related costs of facilities as determined by the formula shown below. The Capacity Ownership Share shall be determined pursuant to the Capacity Ownership agreement.

$$\frac{(A - B) + C + D}{E} = \text{Capacity Ownership Price in } \$/\text{kW}$$

Capacity Ownership Price in \$/kW x number of kW contracted for by Capacity Owner = Capacity Owner's payment to Bonneville

~~Where:~~

**A =** Bonneville's cost of new facilities for the Third AC Intertie, which increased the rate transfer capability of the PNW AC Intertie by approximately 1600 MW, is the construction costs (including direct, indirect and overhead costs) of the facilities associated with the Third AC Intertie System Reinforcements and the Alvey-Meridia

Transmission Line ( also known as Eugene-Medford 500-kV Transmission Line), referred to jointly as the Third AC Intertie Project.

B = Bonneville's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project, which includes a portion of the construction costs (including direct, indirect and overhead costs) associated with the Third AC Intertie System Reinforcement.

A-B = The cost of new facilities for the second 800 MW increment of the 1600 MW Third AC Intertie Project (presented in Exhibit C of the Capacity Ownership agreement).

C = Allowance for Funds Used During Construction (AFUDC) constitutes interest on the funds used for the Third AC Intertie Project while it was under construction. AFUDC is calculated and capitalized consistent with FERC requirements as described in FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions, 3.A(17). The AFUDC applies to that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.

D = Book value of existing Bonneville support facilities that are dedicated to the PNW AC Intertie equal to \$19,100,000.

E = 725,000 kW, which equals Bonneville's share of the second 800 MW of the Third AC Intertie.

**B. PNW AC Intertie Upgrade Price**

The charge for upgrades to Bonneville's PNW AC Intertie facilities that occur after December 1993, and which result in an increase of rated transfer capability, shall be the Capacity Ownership Share of the capital and related costs of the upgrade. The Capacity Ownership Share of any upgrades shall be determined pursuant to the Capacity Ownership agreement. The capital costs shall consist of the construction costs (including direct, indirect and overhead costs) and AFUDC (as described in Section III.A. above) of the facilities associated with such upgrades.

#### Section IV. Adjustments and Special Provisions

##### A. Initial Lump Sum Payment

Capacity Owners shall make an initial, lump sum payment of an estimate of the Capacity Ownership Price equal to \$215/kW pursuant to the Capacity Ownership agreement.

##### B. Adjustment to Reflect Actual Construction Costs

Approximately December 1995 or as soon as practicable thereafter, the Capacity Owner's initial lump sum payment shall be adjusted to reflect the difference between the actual and the estimated Capacity Ownership Price. The actual Capacity Ownership Price shall be determined pursuant to Section III.A. above. There will be no adjustment for the book value of the support facilities dedicated to the PNW AC Intertie. Capacity Owners will either receive a refund, with interest, from Bonneville or make an additional payment, with interest, to Bonneville. Bonneville shall compute interest using the weighted average interest rate on Bonneville's outstanding bonds.

##### C. PNW AC Intertie Upgrade Payments

Capacity Owners shall pay a share of the upgrades to Bonneville's PNW AC Intertie in the manner and time to be determined when participation in such upgrades are agreed to pursuant to the Capacity Ownership agreement.



Schedule AC-93  
Southern Intertie Annual Cost

SECTION I. AVAILABILITY

This schedule is applicable to all parties (New Owners) that execute PNW AC Intertie Capacity Ownership Agreements (Agreements) and will be effective on the date described in the Agreement. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

The rate charges reflect the terms of the Memorandum of Understanding (MOU), signed in the Fall of 1991, between BPA and potential New Owners. The MOU provides for the payment by New Owners of their prorated share of: (1) BPA's annual operations, maintenance, and general plant expense (including applicable overheads) properly chargeable to the AC Intertie facilities; and (2) BPA's share of capitalized replacements on the AC Intertie. The monthly charge shall be the sum of the charges specified in sections II.A and II.B.

A. Operations, Maintenance, and General Plant

The monthly charge shall equal \$325 per megawatt of billing demand.

B. Replacements

The monthly charge shall equal \$0 per megawatt of billing demand.

SECTION III: ADJUSTMENT TO  
REPLACEMENTS RATE

A. Determination of Billing Adjustment

New Owners will receive a billing adjustment if BPA incurs AC Intertie replacement cost during the rate period. The Replacements Rate Adjustment equals:

$$\frac{\text{AC Intertie work orders (\$XXX)} \times \%}{725 \text{ MW} \times \# \text{ months}}$$

where:

"# months" equals: (1) the number of months that this rate schedule is in effect during the fiscal year for the Initial Replacements Rate Adjustment; or (2) the number of months in the rate period for the Final Replacements Rate Adjustment; and

"%" equals the New Owners' percentage share of BPA's total AC Intertie Rated Transfer Capability as specified in the Agreements.

B. Initial Replacements Rate Adjustment

New Owners will receive a billing adjustment for each fiscal year that BPA incurs AC Intertie replacement cost. At the end of each fiscal year, the cost associated with AC Intertie capital replacement work orders that have closed during the fiscal year will be determined. The unit rate that would result using these closed work orders is the basis of the Initial Replacements Rate Adjustment.

1. Notice Provisions

Following each fiscal year, BPA shall notify all New Owners by December 15 of the proposed Replacements Rate Adjustment. BPA will provide the calculation of the adjustment and a short description of the work performed and the associated cost used as the basis for the billing adjustment. In addition to written notification, BPA may, but is not obligated to, hold a public meeting to clarify its determinations.

Schedule AC-93  
(Continued)

Written comments on the Initial Replacements Rate Adjustment will be accepted through the end of January. Consideration of comments submitted by the New Owners may result in the billing adjustment differing from the initially proposed adjustment. BPA shall notify all New Owners of the Initial Replacements Rate Adjustment by the last day of February.

2. Adjustment of Monthly Bills

An adjustment will be made on the New Owner's monthly bill prepared during March. The Initial Replacements Rate adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal year (i.e., the New Owner's share in megawatts of BPA's PNW AC Inter tie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal year). The Initial Replacements Rate Adjustment will appear as a charge to the New Owner on the monthly bill prepared during March.

C. Final Replacements Rate Adjustment

The actual costs associated with the AC Inter tie capital replacement work orders that occur during the rate period may change after BPA performs its final analysis of the work orders. BPA shall compare the unit rate for the rate period using the results of the final work order analysis to the weighted average of the unit rates from the Initial Replacements Rate Adjustments.

1. Notice Provisions

BPA shall notify all New Owners in May 1998 of the results of the calculations, an explanation of work

order change(s), and any resulting billing adjustment. Written comments from New Owners will be accepted through the end of June. BPA shall notify all New Owners of the Final Replacements Rate Adjustment by July 31. Consideration of comments submitted by the New Owners may result in the Final Replacements Rate Adjustment differing from the initially proposed adjustment.

2. Adjustment of Monthly Bills

If the absolute value of the Final Replacements Rate Adjustment is greater than or equal to \$1 per megawatt per month, an adjustment will be made on the New Owner's monthly bill prepared during August. For each New Owner, the Final Replacements Rate Adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal years (i.e., the New Owner's share in megawatts of BPA's PNW AC Inter tie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal years). The Final Replacements Rate Adjustment will appear as a charge or credit to the New Owner on the monthly bill prepared during August. Interest, as determined by BPA's Office of Financial Management, will be included in any adjustment.

SECTION IV. BILLING FACTOR

The billing demand shall be the New Owner's capacity ownership share in megawatts of BPA's PNW AC Inter tie Rated Transfer Capability as specified in the Agreement.

Schedule IS-93  
Southern Intertie Transmission

SECTION I. AVAILABILITY

This schedule supersedes IS-91 and is available for all transmission on the Southern Intertie. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

A. Nonfirm Transmission Rate

The charge for nonfirm transmission of non-BPA power shall be 3.11 mills per kilowatthour of billing energy. This charge applies for both north-to-south and south-to-north transactions.

B. Firm Transmission Rate

The charge for firm transmission service shall be \$0.706 per kilowatt per month of billing demand and 1.69 mills per kilowatthour of billing energy. Firm transmission will only be made available to customers under this rate schedule who have executed a contract with BPA specifying use of the Firm Transmission rate for either north-to-south or south-to-north transactions.

SECTION III. BILLING FACTORS

A. For services under Section II.A, the billing energy shall be the monthly sum of the scheduled kilowatthours, plus the monthly sum of kilowatthours allocated but not scheduled. The amount of allocated but not scheduled energy that is subject to billing may be reduced pro rata by BPA due to forced Intertie outages and other uncontrollable forces that may reduce Intertie capacity. The amount of allocated but not scheduled energy that is subject to billing

also may be reduced upon mutual agreement between BPA and the customer.

B. For services under Section II.B, the billing demand shall be the Transmission Demand as defined in the Agreement. The billing energy shall be the monthly sum of scheduled kilowatthours, unless otherwise specified in the Agreement.

## General Transmission Rate Schedule Provisions

### SECTION I. ADOPTION OF REVISED TRANSMISSION RATE SCHEDULES AND GENERAL TRANSMISSION RATE SCHEDULE PROVISIONS (GTRSPs)

#### A. Approval of Rates

These rate schedules and GTRSPs shall become effective upon interim approval or upon final confirmation and approval by FERC. BPA will request FERC approval effective October 1, 1993.

#### B. General Provisions

These 1993 Transmission Rate Schedules and associated GTRSPs are virtually identical to and supersede BPA's 1991 Transmission Rate Schedules and GTRSPs (which became effective October 1, 1991) but do not supersede prior rate schedules required by agreement to remain in force.

Transmission service provided shall be subject to the following Acts, as amended: the Bonneville Project Act, the Regional Preference Act (P.L. 88-552), the Federal Columbia River Transmission System Act, and the Pacific Northwest Electric Power Planning and Conservation Act, and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992).

The meaning of terms used in the transmission rate schedules shall be as defined in agreements or provisions which are attached to the Agreement or as in any of the above Acts.

#### C. Interpretation

If a provision in the executed Agreement is in conflict with a provision contained herein, the former shall prevail.

### SECTION II. BILLING FACTOR DEFINITIONS AND BILLING ADJUSTMENTS

#### A. Billing Factors

##### 1. Scheduled Demand

The largest of hourly amounts wheeled which are scheduled by the customer during the time period specified in the rate schedules.

##### 2. Metered Demand

The Metered Demand in kilowatts shall be the largest of the 60-minute clock-hour integrated demands measured by meters installed at each POD during each time period specified in the applicable rate schedule. Such measurements shall be made as specified in the Agreement. BPA, in determining the Metered Demand, will exclude any abnormal readings due to or resulting from: (a) emergencies or breakdowns on, or maintenance of, the FCRTS; or (b) emergencies on the customer's facilities, provided that such facilities have been adequately maintained and prudently operated as determined by BPA. If more than one class of power is delivered to any POD, the portion of the metered quantities assigned to any class of power shall be as agreed to by the parties. The amount so assigned shall constitute the Metered Demand for such class of power.

3. Transmission Demand

The demand as defined in the Agreement.

4. Total Transmission Demand

The sum of the transmission demands as defined in the Agreement.

5. Ratchet Demand

The maximum demand established during the previous 11 billing months. Exception: If a Transmission Demand or Total Transmission Demand has been decreased pursuant to the terms of the Agreement during the previous 11 billing months, such decrease will be reflected in determining the Ratchet Demand.

B. Billing Adjustments

Average Power Factor

The adjustment for average power factor, when specified in a transmission rate schedule or in the Agreement, shall be made in accordance with the average power factor section of the General Wheeling Provisions.

To maintain acceptable operating conditions on the Federal system, BPA may restrict deliveries of power at any time that the average leading power factor or average lagging power factor for all classes of power delivered to such point or to such system is below 85 percent.

SECTION III. OTHER DEFINITIONS

Definitions of the terms below shall be applied to these provisions and the Transmission Rate Schedules, unless otherwise defined in the Agreement.

A. Agreement

An agreement between BPA and a customer to which these rate schedules and provisions may be applied.

B. Eastern Intertie

The segment of the FCRTS for which the transmission facilities consist of the Townsend-Garrison double-circuit 500 kV transmission line segment including related terminals at Garrison.

C. Electric Power

Electric peaking capacity (kW) and/or electric energy (kWh).

D. Federal Columbia River Transmission System

The transmission facilities of the Federal Columbia River Power System, which include all transmission facilities owned by the government and operated by BPA, and other facilities over which BPA has obtained transmission rights.

E. Firm Transmission Service

Transmission service which BPA provides for any non-BPA power except for transmission service which is scheduled as nonfirm. If the firm service is provided pursuant to the Agreement, the terms of the Agreement may further define the service.

F. Integrated Network

The segment of the FCRTS for which the transmission facilities provide the bulk of transmission of electric power within the Pacific Northwest, excluding facilities not segmented to the network as shown in the Wholesale Power Rate Development Study used in BPA's rate development.

G. Main Grid

As used in the FPT and IR rate schedules, that portion of the Integrated Network with facilities rated 230 kV and higher.

H. Main Grid Distance

As used in the FPT rate schedules, the distance in airline miles on the Main Grid between the POI and the POD, multiplied by 1.15.

I. Main Grid Interconnection Terminal

As used in the FPT rate schedules, Main Grid terminal facilities that interconnect the FCRTS with non-BPA facilities.

J. Main Grid Miscellaneous Facilities

As used in the FPT rate schedules, switching, transformation, and other facilities of the Main Grid not included in other components.

K. Main Grid Terminal

As used in the FPT rate schedules, the Main Grid terminal facilities located at the sending and/or receiving end of a line exclusive of the Interconnection terminals.

L. Nonfirm Transmission Service

Interruptible transmission service which BPA may provide for non-BPA power.

M. Northern Intertie

The segment of the FCRTS for which the transmission facilities consist of two 500 kV lines between Custer Substation and the United States-Canadian border, one 500 kV line between Custer and Monroe Substations, and two 230 kV lines from Boundary Substation to the United States-Canadian border, and the associated substation facilities.

N. Point of Integration (POI)

Connection points between the FCRTS and non-BPA facilities where non-Federal power is made available to BPA for wheeling.

O. Point of Delivery (POD)

Connection points between the FCRTS and non-BPA facilities where non-Federal power is delivered to a customer by BPA.

P. Secondary System

As used in the FPT and IR rate schedules, that portion of the Integrated Network facilities with operating voltage of 115 kV or 69 kV.

Q. Secondary System Distance

As used in the FPT rate schedules, the number of circuit miles of Secondary System transmission lines between the secondary POI and the Main Grid or the secondary POD, or the Main Grid and the secondary POD.

R. Secondary System Interconnection Terminal

As used in the FPT rate schedules, the terminal facilities on the Secondary System that interconnect the FCRTS with non-BPA facilities.

S. Secondary System Intermediate Terminal

As used in the FPT rate schedules, the first and final terminal facilities in the Secondary System transmission path exclusive of the Secondary System Interconnection terminals.

T. Secondary Transformation

As used in the FPT rate schedules, transformation from Main Grid to Secondary System facilities.

#### U. Southern Intertie

The segment of the FCRTS for which the major transmission facilities consist of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; when completed, the Third AC facilities, which include Captain Jack Substation and the Alvey-Meridian 500 kV AC line; one 1,000 kV DC line between the Celilo Substation and the Oregon-Nevada border; and associated substation facilities.

#### V. Transmission Service

As used in the MT rate schedule, Transmission Service is as defined in the Western Systems Power Pool Agreement.

### SECTION IV. BILLING INFORMATION

#### A. Payment of Bills

Bills for transmission service shall be rendered monthly by BPA. Failure to receive a bill shall not release the customer from liability for payment. Bills for amounts due of \$50,000 or more must be paid by direct wire transfer; customers who expect that their average monthly bill will not exceed \$50,000 and who expect special difficulties in meeting this requirement may request, and BPA may approve, an exemption from this requirement. Bills for amounts due BPA under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by BPA. The procedures to be followed in making direct wire transfers will be provided by the Office of Financial Management and updated as necessary.

##### 1. Computation of Bills

The transmission billing determinant is the electric power quantified by the

method specified in the Agreement or Transmission Rate Schedule. Scheduled power or metered power will be used.

The transmission customer shall provide necessary information to BPA for any computation required to determine the proper charges for use of the FCRTS, and shall cooperate with BPA in the exchange of additional information which may be reasonably useful for respective operations.

Demand and energy billings for transmission service under each applicable rate schedule shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amount from 50 cents through 99 cents to the next higher dollar.

##### 2. Estimated Bills

At its option, BPA may elect to render an estimated bill to be followed at a subsequent billing date by a final bill. The estimated bill shall have the validity of and be subject to the same payment provisions as a final bill.

##### 3. Billing Month

For charges based on scheduled quantities, the billing month is the calendar month. For charges based on metered quantities, the billing month is defined as the interval between scheduled meter-reading dates. The billing month will not exceed 31 days in any case. While it may be necessary to read meters on a day other than the scheduled meter-reading date, for determination of billing demand, the billing month will cease at 2400 hours on the last scheduled meter-reading date. Schedules will be predetermined. The customer must give 30 days notice to request a change to the schedule.

4. Due Date

Bills shall be due by close of business on the 20th day after the date of the bill (due date). Should the 20th day be a Saturday, Sunday, or holiday (as celebrated by the customer), the due date shall be the next following business day.

5. Late Payment

Bills not paid in full on or before close of business on the due date shall be subject to a penalty charge of \$25. In addition, an interest charge of one-twentieth percent (0.05 percent) shall be applied each day to the sum of the unpaid amount and the penalty charge. This interest charge shall be assessed on a daily basis until such time as the unpaid amount and penalty charge are paid in full.

Remittances received by mail will be accepted without assessment of the charges referred to in the preceding paragraph provided the postmark indicates the payment was mailed on or before the due date. Whenever a power bill or a portion thereof remains unpaid subsequent to the due date and after giving 30 days' advance notice in writing, BPA may cancel the contract for service to the customer. However, such cancellation shall not affect the customer's liability for any charges accrued prior thereto under such agreement.

6. Disputed Billings

In the event of a disputed billing, full payment shall be rendered to BPA and the ~~disputed amount noted~~. Disputed amounts are subject to the late payment provisions specified above. BPA shall separately account for the disputed amount. If it is determined that the customer is entitled to the disputed

amount, BPA shall refund the disputed amount with interest, as determined by BPA's Office of Financial Management.

BPA retains the right to verify, in a manner satisfactory to the Administrator, all data submitted to BPA for use in the calculation of BPA's rates and corresponding rate adjustments. BPA also retains the right to deny eligibility for any BPA rate or corresponding rate adjustment until all submitted data have been accepted by BPA as complete, accurate, and appropriate for the rate or adjustment under consideration.

7. Revised Bills

As necessary, BPA may render a revised bill.

- a. If the amount of the revised bill is less than or equal to the amount of the original bill, the revised bill shall replace all previous bills issued by BPA that pertain to the specified customer for the specified billing period and the revised bill shall have the same date as the replaced bill.
- b. If a revision causes an additional amount to be due BPA or the specified customer beyond the amount of the original bill, a revised bill will be issued for the difference and the date of the revised bill shall be its date of issue.



**Annual Costs Rate**

**A. PROPOSED SOUTHERN INTERTIE ANNUAL COST RATE**

**SECTION I. AVAILABILITY**

This schedule is applicable to each party (Capacity Owner) that executes a PNW AC Intertie Capacity Ownership Agreement (Agreement). Billings pursuant to this schedule is subject to the Billing Provisions in Exhibit B of the Agreement. This rate schedule shall be effective on the first day of the fiscal year following the earlier of interim or final FERC approval of this rate schedule. Unless otherwise defined in this rate schedule, capitalized terms used in this rate schedule shall have the respective definitions set forth in section 1 of this Agreement.

**SECTION II. RATE**

**A. Operations**

The monthly charge equals:

$$\frac{\text{Operations Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Operations Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Operations Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville’s PNW AC Intertie, operations Indirect Costs for Bonneville’s PNW AC Intertie, and operations Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Operations rate shall be calculated using the forecast Operations Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is

amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Operations Cost shall be calculated using the forecast Operations Cost less the Operations Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **B. Maintenance**

The monthly charge equals:

$$\frac{\text{Maintenance Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Maintenance Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Maintenance Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville’s PNW AC Intertie, maintenance Indirect Costs for Bonneville’s PNW AC Intertie, and maintenance Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Maintenance rate shall be calculated using the forecast Maintenance Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Maintenance Cost shall be calculated using the forecast Maintenance Cost less the Maintenance Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **C. General Plant**

The monthly charge equals:

$$\frac{\text{General Plant Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to General Plant Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the General Plant rate shall be calculated using the General Plant Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for General Plant Cost shall be calculated using the General Plant Cost less the General Plant Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### D. Other Costs

The monthly charge equals:

$$\frac{\text{Other Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

"Months" is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Other Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

"Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The monthly charge for the Other Costs rate shall be calculated using the forecast Other Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Other Costs shall be calculated using the forecast Other Costs less the Other Costs already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

**E. Contracts and Rates**

The monthly charge equals:

$$\frac{\text{Contracts and Rates Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Contracts and Rates Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Contracts and Rates Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville’s total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Contracts and Rates Cost is determined in accordance with section VI of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Contracts and Rates Cost determined in accordance with section VI of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Contracts and Rates rate shall be calculated using the forecast Contracts and Rates Costs in the Operating Plan in effect during the

month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Contracts and Rates Cost shall be calculated using the forecast Contracts and Rates Cost less the Contracts and Rates Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### F. Power Scheduling

The monthly charge equals:

$$\frac{\text{Power Scheduling Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Power Scheduling Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Power Scheduling Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Power Scheduling Cost is determined in accordance with section VII of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Power Scheduling Cost determined in accordance with section VII of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Power Scheduling rate shall be calculated using the forecast Power Scheduling Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan

pertains, the monthly charge for Power Scheduling Cost shall be calculated using the forecast Power Scheduling Cost less the Power Scheduling Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **G. End of Term**

The monthly charge shall equals:

$$\frac{\text{End of Term Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to End of Term Costs, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“End of Term Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the End of Term rate shall be calculated using the forecast End of Term Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for End of Term Costs shall be calculated using the forecast End of Term Costs less the End of Term Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **H. Replacements and Reinforcements**

1. For each Replacement, the charge equals:

$$\text{Replacement Cost} * \text{Capacity Ownership Percentage}$$

2. For each Reinforcement, the charge equals:

$$\text{Reinforcement Cost} * \text{Capacity Ownership Percentage}$$

Where

"Replacement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Replacement Cost does not include capitalized general plant cost. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Reinforcement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Reinforcement Cost does not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The charge for the Replacements and Reinforcements rate shall use the actual Replacement Cost and Reinforcement Cost in the Operating Plan.

### **SECTION III. ADJUSTMENTS**

If an amendment to the Operating Plan results in a net amount that Bonneville owes the Capacity Owners pursuant to sections II.A-G or pursuant to section II.H, Bonneville shall refund such net amount pursuant to paragraph 9(f)(4) of the Agreement.

The monthly charges assessed Capacity Owners under sections II.A-G shall be adjusted, and payment or refund made with interest, pursuant to paragraphs 9(b)(2) or 9(f)(4) of the Agreement, to reflect amendments to the Operating Plan that occur after the year to which such Operating Plan pertains.

A Capacity Owner's share of the adjustment shall be determined using the same Capacity Ownership Percentage used in the billings under sections II.A-G during the fiscal year that such Operating Plan is effective.



B. BILLING PROVISIONS

I. General Provisions

A. Approval of Rates

The annual costs rate shall become effective upon interim approval or upon final confirmation and approval by FERC. Bonneville will request FERC approval of such rate schedule effective on the first day of a Bonneville fiscal year.

B. Application of Billing Provisions

These Billing Provisions shall apply to bills rendered by Bonneville pursuant to the annual costs rate.

C. Definition of Terms

The meaning of terms used in the AC-95 rate shall be as defined in the Agreement or, if no definition is provided by the Agreement, such terms shall be defined according to applicable Federal law.

II Billing Information

Payment of Bills

Charges pursuant to the AC-95 rate shall be included in Bonneville's monthly power bill to Capacity Owner. Failure to receive a power bill shall not release Capacity Owner from liability for payment. Power bills for amounts due of \$50,000 or more must be paid by direct wire transfer. If Capacity Owner anticipates special difficulties in meeting this requirement, Capacity Owner may request and Bonneville may approve an exemption from this requirement. Power bills for amounts due Bonneville under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by Bonneville. The procedures to be followed in making direct wire transfers will be provided by Bonneville's Financial Services Group and updated as necessary.

(1) Computation of Bills

(a) Bonneville shall bill Capacity Owner in accordance with the annual costs rate.

(b) Capacity Owner shall provide necessary information to Bonneville for any computation required to determine proper charges pursuant to the Agreement and shall cooperate with Bonneville in the exchange of additional information which may be reasonably useful for respective operations.

(c) Bills rendered pursuant to this Agreement shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents to 99 cents to the next higher whole dollar.

(2) Billing Month

For charges pursuant to the annual costs rate the billing month shall be the same as for the power bill rendered by Bonneville to Capacity Owner.

(3) Due Date

Charges pursuant to the annual costs rate shall be included in the power bill rendered by Bonneville to Capacity Owner and shall be due as part of the power bill when such power bill is due.

(4) Late Payment

The penalties for failure to pay a bill in full on or before close of business on the due date shall be the same as those contained in the late payment provisions in Bonneville's General Transmission Rate Schedule Provisions in effect on the date of the bill; provided, however, that no other provision of any such General Transmission Rate Schedule Provisions, including, but not limited to, provisions regarding cancellation, termination, or suspension of service, shall have application with respect to the payment of any rate or charge pursuant to the annual costs rate set forth in Exhibit B. Bonneville's right to suspend service for late payment under the Agreement shall be pursuant to paragraph 9(e)(1) of this Agreement, which right shall in no way be limited by this section.

(5) Disputed Bills

In the event of a disputed bill, full payment shall be rendered to Bonneville and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified in section II(4) of the Billing Provisions of this Exhibit B. Bonneville shall separately account for the disputed amount. If it is determined that Capacity Owner is entitled to the disputed amount, Bonneville shall refund the disputed amount with interest, such interest to

be determined by Bonneville's Financial Services Group. In the event that Bonneville and Capacity Owner do not resolve such dispute, Capacity Owner shall not be prevented by this section II(5) of the Billing Provisions of this Exhibit B from initiating arbitration pursuant to and to the extent allowed by section 15 of this Agreement.

(6) Revised Bills

If Bonneville determines that it has over- or under-charged Capacity Owner due to a computational error or pursuant to an amendment to the Operating Plan in any given billing month, Bonneville may render to Capacity Owner a revised bill.

(i) If the amount of the revised bill is less than or equal to the amount of the original bill for such billing month, the revised bill shall replace the original bill issued by Bonneville. The revised bill shall have the same date as the original bill.

(ii) If the amount of the revised bill is greater than the amount of the original bill for such billing month, a new bill will be issued for the difference between the revised bill and the original bill. The date of the new bill shall be its date of issuance, and Capacity Owner shall make payment to Bonneville as specified in the Billing Provisions of this Exhibit B.

**Capacity Ownership Share, Capacity Ownership Percentage, Scheduling  
Percentage, and Scheduling Share**

Capacity Ownership  
Share = 42 MW

Capacity Ownership  
Percentage =  $\frac{\text{Capacity Ownership Share}}{\text{Bonneville's PNW AC Intertie  
Rated Transfer Capability}^1}$

Scheduling Percentage =  $\frac{\text{Capacity Ownership Share}}{\text{PNW AC Intertie Rated  
Transfer Capability}}$

Scheduling Share =  $\text{Scheduling Percentage} \times \text{PNW AC Intertie Operational  
Transfer Capability}$

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<sup>1/</sup> As of the Effective Date, Bonneville's PNW AC Intertie Rated Transfer  
Capability in a north-to-south direction, calculated in accordance with the  
Northwest Intertie Agreements equals 3450 MW (total PNW AC Intertie Rated  
Transfer Capability (4800 MW) – Portland's PNW AC Intertie Rated Transfer  
Capability (950 MW) – PacifiCorp's PNW AC Intertie Rated Transfer  
Capability (400 MW)).

**Lump Sum Payment Calculation**

**A. SECOND 800 MW COSTS, ESTIMATED<sup>1</sup>, ACTUAL<sup>2</sup>, AND REVISED ACTUAL<sup>3</sup>**

		(\$ in Thousands)		
		(1)	(2)	
<u>Facilities whose costs will be adjusted using change Between Estimate and Actual</u>	BPA's Costs <u>Estimated</u>	BPA's Costs <u>Actual</u>	BPA's Costs <u>Revised Actual</u>	
1.	Alvey (Marion-Alvey Caps)	\$5,739		
2.	Slatt (Loop in - Breaker)	3,044		
3.	Grizzly (BPA Breakers)	11,044		
4.	Loop into Slatt	656		
5.	Malin-Meridian loop into Captain Jack	982		
6.	Alvey Substation - BPA	8,168		
7.	Dixonville - PacifiCorp	8,635		
8.	Meridian - PacifiCorp	6,548		
9.	Power System Control	3,575		
10.	Alvey-Spencer - BPA	1,346		
11.	Spencer-Dixonville - PacifiCorp	20,388		
12.	Dixonville-Meridian - PacifiCorp	<u>32,140</u>		
	<b>SUBTOTAL</b>	<b>102,265</b>		
<u>Facilities whose costs will be adjusted using Change Between Estimate and Actual, multiplied by 50 percent</u>				
13.	Captain Jack (BPA Breakers)	\$14,335		
14.	Captain Jack (Communication and Control)	5,100		
15.	Captain Jack (Series Capacitors)	722		
16.	Power System Control	5,596		
17.	Captain Jack line to Oregon-Calif. border	<u>5,724</u>		
	<b>SUBTOTAL</b>	<b>\$31,477</b>		
	<b>50 PERCENT OF SUBTOTAL</b>	<b><u>15,739</u></b>		
	 <b>TOTAL</b>	 <b><u>\$118,004</u></b>		

<sup>1/</sup> Based on mid-1989 program planning levels.

<sup>2/</sup> Actual costs will be available approximately December 1995, or as soon as practicable thereafter. Supporting documentation will be provided including work orders and accounting data for each line item.

<sup>3/</sup> For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the revised actual costs of facilities pertaining to each such calculation of the Revised Adjusted Capacity Ownership Price.

B. INITIAL, ADJUSTED, AND REVISED ADJUSTED CAPACITY OWNERSHIP PRICE<sup>1</sup>

	(1)	(\$ in Millions) (2)	
<u>Cost Item</u>	Initial Capacity Ownership Price	Adjusted Capacity Ownership Price	Revised Adjusted Capacity Ownership Price <sup>2</sup>
1. Second 800 MW	\$118	\$___	\$___
2. AFUDC <sup>3</sup> on Second 800 MW	+ 19	+ ___	+ ___
3. Existing Support Facilities	+ <u>19.1</u>	+ <u>19.1<sup>4</sup></u>	+ <u>19.1<sup>4</sup></u>
4. Total Cost <sup>5</sup>	\$156	\$___	\$___
5. PRICE PER KW (CO-94) <sup>6</sup>	<u>\$215</u>	\$___	\$___

- 
- 1/ Initial, Adjusted, and Revised Adjusted Capacity Ownership Price are determined in accordance with the CO-94 rate in Exhibit A.
  - 2/ Bonneville may make multiple calculations of the Revised Adjusted Capacity Ownership Price pursuant to paragraph 9(a)(3). For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the column pertaining to such calculation and the columns for any previous calculations of the Revised Adjusted Capacity Ownership Price.
  - 3/ AFUDC will be calculated in accordance with the CO-94 rate in Exhibit A.
  - 4/ Not adjusted in calculating the Adjusted Capacity Ownership Price or the Revised Adjusted Capacity Ownership Price.
  - 5/ Bonneville's indirect costs and overhead costs shall be included. Such indirect costs and overhead costs shall be allocated or distributed to the Third AC Intertie Project using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Third AC Intertie Project was under construction. Such allocation or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's Third AC Intertie Project than with respect to any other transmission projects under construction at the same time.
  - 6/ Price per kW is derived by dividing the Total Cost by 725 MW.

C. INITIAL LUMP SUM PAYMENT

1.	Snohomish's Capacity Ownership Share	=	42 MW
2.	Initial Capacity Ownership Price	X	\$215 (\$215,000/MW)
3.	Initial Lump Sum Payment <sup>1</sup>	=	\$9,030,000
4.	Deduction: Negotiation Deposit with Interest <sup>2</sup>	-	
5.	Due to Bonneville:	=	

1/ Initial Lump Sum Payment is calculated in accordance with section IV.A of the CO-94 rate in Exhibit A.

2/ Interest is calculated as specified in Bonneville's April 23, 1993, letter to Snohomish. The rate of interest for the computation is the interest rate applicable to 3-month Treasury Bills as specified in the FEDERAL RESERVE Statistical Release G.13. The rates are determined for the 3-month yield reported on the first day of the month of receipt of the negotiation deposit and on the first day of each subsequent third month thereafter. Interest is compounded quarterly from May 11, 1993, through the date Bonneville receives payment pursuant to paragraph 9(a)(1).

D. ADJUSTED LUMP SUM PAYMENT

1.	Snohomish's Capacity Ownership Share	=	42 MW
2.	Adjusted Capacity Ownership Price	X	\$
3.	Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Initial Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Snohomish	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Snohomish	=	

1/ Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A.

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from the date Bonneville receives payment pursuant to paragraph 9(a)(1) through the date Bonneville or Snohomish receives payment pursuant to subparagraph 9(a)(2)(B).



E. REVISED ADJUSTED LUMP SUM PAYMENT

1.	Snohomish's Capacity Ownership Share	=	42 MW
2.	Current Revised Adjusted Capacity Ownership Price	X	\$
3.	Current Revised Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Adjusted Lump Sum Payment/immediately preceding Revised Adjusted Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to Snohomish	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to Snohomish	=	

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1/ Revised Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A. Bonneville will calculate a Revised Adjusted Lump Sum Payment each time a Revised Adjusted Capacity Ownership Price is calculated pursuant to paragraph 9(a)(3).

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from (a) the date Bonneville or Snohomish receives payment with respect to the Adjusted Lump Sum Payment pursuant to paragraph 9(a)(2)(B) or (b) the date Bonneville or Snohomish receives payment with respect to the Revised Adjusted Lump Sum Payment immediately preceding the current Revised Adjusted Lump Sum Payment through the date Bonneville or Snohomish receives payment with respect to the current Revised Adjusted Lump Sum Payment pursuant to subparagraph 9(a)(3)(B).

**Transmission Loss Factors**

- A. The transmission loss factor to be applied to Snohomish's schedules for transactions transmitted on Snohomish's Scheduling Share shall be 2.5 percent.
- B. The transmission loss factor to be applied to Snohomish's schedules for transactions transmitted pursuant to subparagraph 3(b)(1)(C) shall be 3.0 percent.

**Bonneville's PNW AC Intertie**

**A. TRANSMISSION LINE FACILITIES**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>McNary-John Day 500 kV Line Loop into Slatt:</u>	100	100
• McNary-Slatt Str. 108/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. 1/1 to substation dead end tower, 194 meters		
2. John Day-Grizzly No. 1 500 kV	100	100
3. John Day-Grizzly No. 2 500 kV	100	100
4. Grizzly-Captain Jack No. 1 500 kV	100	100
5. Captain Jack-Malin No. 1 500 kV	100	100
6. Buckley-Grizzly 500 kV	100	57
7. Grizzly-Summer Lake 500 kV	100	57
8. 500 kV double circuit between Buckley and Marion that supports the Buckley-Marion No. 1 and the Ashe-Marion No. 2 500 kV circuits (Str. No. 1/3 to Marion, 159 km)	100	25
9. Marion-Alvey 500 kV	100	50
10. Captain Jack-COB (10 km) 500 kV	100	100
11. Alvey-Dixonville 500 kV	50	100
12. Dixonville-Meridian 500 kV	50	100

**B. SUBSTATION FACILITIES 1/2**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <b>Slatt 500 kV</b> (Dispatch one-line diagram No. 228962)		
<u>John Day line terminal</u>		
• New Breaker D#5021	100	100
• Existing 500 kV MOD D#5020/7022	100	100
• New 500 kV MOD D#5022	100	100
• Existing 500 kV MOD D#5019	100	50
• Existing Breaker D#5018	100	50

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>McNary line terminal</u>		
• 500 kV MOD D#5023/7847	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General		
2. <b>John Day 500 kV</b> (Dispatch one-line diagram No. 132281)		
<u>Grizzly No.2 line terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4132	100	50
• MOD D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No.1 line terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General		
3. <b>Buckley 500 kV, Gas Insulated Substation</b> (Dispatch one-line diagram No. 232583)		
<u>Slatt No. 1 line terminal</u>		
• Breaker D#4967	100	57
• Isolating switch D#4966/7328	100	57
• Isolating switch D#4968/7355	100	57
• Ground switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 line terminal</u>		
• Breaker D#4961	100	57

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• Isolating switch D#4960/7312	100	57
• Isolating switch D#4962/7313	100	57
• Ground switch D#7311	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 line terminal</u>		
• Breaker D#4964	100	57
• Isolating switch D#4963/7314	100	57
• Isolating switch D#4965/7321	100	57
• Ground switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General		
4. <b>Marion 500 kV</b> (Dispatch one-line diagram No. 136180)		
<u>Buckley line terminal</u>		
• Breaker D#4389	100	50
• Breaker D#4386	100	25
• MOD D#4387	100	25
• MOD D#4390	100	50
• MOD D#4388/7751	100	50
• Associated Line PTs	100	50
<u>Alvey line terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4376	100	25
• MOD D#4375/7922	100	50
• MOD D#4373	100	50
• Associated Line PTs	100	50
Station General		
5. <b>Alvey 500 kV</b> (Dispatch one-line diagram No. 121424)		
<u>Bank No. 5 terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD D#5090	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#5089/8157	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 line terminal</u>		
• Breaker D#5084	50	100
• MOD D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 line terminal</u>		
• Breaker D#5087	50	100
• MOD D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV line)</u>		
• MODs D#5100/8160,5101/8159, 5102/8158	50	100
• Bypass breaker D#5103	50	100
Station General		
6. <b>BPA/PacifiCorp Dixonville 500 kV Station</b> (PacifiCorp's one-line diagram PD-40020)		
<u>Note: PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299, as revised or amended.</u>		
<u>For Alvey and Meridian line terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of line terminal PTs	50	100
• Two sets of line terminal arresters	50	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

<ul style="list-style-type: none"> <li>• Series Capacitor Bank in Alvey-Dixonville 500 kV line and associated isolating devices</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• 180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices</li> </ul>	50	100
Station General		
7. <b>BPA/PacifiCorp Meridian 500 kV Yard</b> (PacifiCorp's one-line diagram PD-32976)		
<u>Note:</u> PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299.		
<u>For Dixonville line terminal</u>		
<ul style="list-style-type: none"> <li>• Breakers 11R2, 11R6</li> </ul>	50	50
<ul style="list-style-type: none"> <li>• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• One set of line PTs</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• One set of line terminal arresters for the Dixonville line and one set for the Captain Jack line</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices</li> </ul>	50	100
<ul style="list-style-type: none"> <li>• Series Capacitor Bank in the Dixonville-Meridian 500 kV line and associated isolating devices.</li> </ul>	50	100
Station General		
8. <b>Grizzly 500 kV</b> (Dispatch one-line diagram No. 103924)		
<u>John Day No. 1 line terminal</u>		
<ul style="list-style-type: none"> <li>• Breaker D#4058</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• Breaker D#5040</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• MOD D#4059</li> </ul>	100	100
<ul style="list-style-type: none"> <li>• MOD D#4057/7848</li> </ul>	100	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4056	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 line terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 line terminal</u>		
• Breaker D#5031	100	100
• Breaker D#5028	100	100
• MOD D#5032	100	100
• MOD D#5030/8122	100	100
• MOD D#5029	100	100
• MOD D#5027	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#5037	100	100
• Breaker D#5034	100	100
• MOD D#5038	100	100
• MOD D#5036/8123	100	100
• MOD D#5035	100	100
• MOD D#5033	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake line terminal</u>		
• Breaker D#5025	100	100
• MOD D#5026/8121	100	100
• MOD D#5024	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100



% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	<u>180 MVAR Reactor Bank No. 1</u>	100	100
	• Breaker D#4222	100	100
	• Isolating Switch D#4060	100	100
	• Associated Arresters	100	100
	<u>300 MVAR Reactor Bank No. 2</u>	100	100
	• Breaker D#4720	100	100
	• Isolating Switch D#4719	100	100
	• Associated Arresters	100	100
	• 300 MVAR Reactor Bank No. 3 and Neutral Reactor	100	100
	• Breaker D#4038	100	100
	• Isolating Switch D#4062	100	100
	• Neutral isolating switch D#4109/4081	100	100
	• Associated Arresters	100	100
	• Associated PTs	100	100
	• North Main Bus 500 kV PTs	100	100
	• South Main Bus 500 kV PTs	100	100
	Station General		
9.	<b>Sand Spring 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142239)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
10.	<b>Fort Rock 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142237)		
	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
	Station General		
11.	<b>Sycan 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142238)		

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

	<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
	<u>Series Cap. Bank No. 3</u> (Summer Lake-Malin line) and associated equipment but <b>excluding</b> the bypass MOD D#5065 and transmission tower	65	100
	Station General		
12.	<b>Summer Lake 500 kV</b> (Dispatch one-line diagram No. 232667)		
	<u>Grizzly line terminal</u> (formerly Buckley-Ponderosa Tap)		
	• Breaker D#4959	100	57
	• MOD D#4955	100	57
	• MOD D#4956/7309	100	57
	• Associated Terminal Arresters	100	57
	• Associated Line PTs	100	57
	<u>Malin line terminal</u>		
	• Line protective relays	0	100
	Station General		
13.	<b>Malin 500 kV</b> (Dispatch one-line diagram No. 103923)		
	<u>Captain Jack No. 1 line terminal</u>		
	• Breaker D#4066	100	100
	• Breaker D#4064	100	100
	• MOD D#4068	100	100
	• MOD D#4067/7849	100	100
	• MOD D#4065	100	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 1 terminal</u>		
	• Breaker D#4186	50	100
	• MOD D#4063/7970	100	100
	• MOD D#4185	50	100
	• MOD D#4187	50	100
	• Associated Terminal Arresters	100	100
	• Associated Line PTs	100	100
	<u>Round Mountain line No. 2 terminal</u>		

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• Breaker D#4582	50	100
• MOD D#4583	50	100
• MOD D#4581	50	100
• MOD D#4074/7856	75	100
<u>Grizzly No. 2/Round Mountain No. 2 line position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
<u>North Main Bus 500 kV PTs</u>	100	100
<u>South Main Bus 500 kV PTs</u>	50	100
<u>300 MVAR Shunt Reactor Bank No. 1 and associated arresters and isolating devices (D#4327, 4393)</u>	100	100
<u>2-239 MVAR Shunt Cap. Banks and associated isolating devices (D#4183, 4181, 4184, 4182, 8065, 8066)</u>	100	100
<u>Line protective relays for Summer Lake line</u>	0	100
Station General		
14. <b>Captain Jack 500 kV</b> (Dispatch one-line diagram No. 248548)		
<u>Series Cap. Bank No. 1</u> (Captain Jack-Olinda line)	100	100
• MODs D#4974/8101, 4973/8099, 4975/8100	100	100
• Bypass breaker D#4971, 4972		
<u>Grizzly No. 1 line terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD D#4991/8104	100	100
• MOD D#4992	100	100
• MOD D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 line terminal</u>		
• Breaker D#4996	100	100

% APPLICABLE TO  
% BPA OWNED    PNW AC INTERTIE

• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Olinda No. 1 line terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
<u>North Main Bus 500 kV PTs</u>	100	100
South Main Bus 500 kV PTs	100	100
Station General		
<b>15. Chief Joseph Substation (Dispatch one-</b>		
<b>line diagram No. 124313)</b>		
<u>230 kV, 1400 MW Braking Resistor</u>	100	100
Includes breaker dispatch No. A-594, a		
high speed vacuum switch and one 230 kV		
isolating switch in Bay 12		
Station General		

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1/ Station General will be allocated to each substation according to Bonneville's standard methodology.

2/ Each substation includes associated relays.

**Capacity Owners**

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
PNGC	DE-MS79-94BP94523	50	1.4
Puget	DE-MS79-94BP94521	400	11.6
Seattle	DE-MS79-94BP94522	160	4.6
Snohomish	DE-MS79-94BP94525	42	1.2
Tacoma	DE-MS79-94BP94524	41	1.1

PNGC: Pacific Northwest Generating Cooperative  
Puget: Puget Sound Power & Light Company  
Seattle: City of Seattle, City Light Department  
Snohomish: Public Utility District No. 1 of Snohomish County  
Tacoma: Tacoma Public Utilities

**Provisions Required by Statute or Executive Order**

1. Contract Work Hours and Safety Standards Act (40 U.S.C. & 327, et seq.).

(a) Overtime Requirements.

Snohomish, contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation: liability for unpaid wages; liquidated damages.

In the event of any violation of the provisions set forth in section 1 of this Exhibit H, Snohomish and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, Snohomish and such subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in section 1 of this Agreement in the sum of \$10.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provision set forth in section 1 of this Exhibit.

(c) Withholding for unpaid wages and liquidated damages.

The person designated in writing by Bonneville's Administrator with the Authority to enter into, administer, modify, suspend or terminate this Exhibit, make related determinations and findings and bind Bonneville only to the extent of delegated authority shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Snohomish or its subcontractor, if any, under any such

contract or any other federal contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of Snohomish or such subcontractor for unpaid wages and liquidated damages as provided in section 2 of this Exhibit.

2. Convict Labor (Exec. Order No. 11755, Dec. 29, 1979).

In connection with the performance or work under this Agreement, Snohomish and any subcontractor, if any agrees not to employ any person undergoing sentence of imprisonment except as otherwise provided by law.

3. Equal Opportunity (Exec. Order No. 11246, Sep. 24, 1965).

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), Snohomish has been or is awarded nonexempt federal contracts and/or subcontracts that have an aggregate value in excess of \$25,000.00, Snohomish shall comply with sections 3(b)(1) through 3(b)(11) below. Upon request, Snohomish shall provide information necessary to determine the applicability of this clause.

(b) During performance of this Agreement, Snohomish agrees as follows:

(1) Snohomish shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

(2) Snohomish shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: (1) employment; (2) upgrading; (3) demotion; (4) transfer; (5) recruitment or recruitment advertising; (6) layoff or termination; (7) rates of pay or other forms of compensation; and (8) selection for training, including apprenticeship.

(3) Snohomish shall post in conspicuous places, available to employees and applicants for employment, the notices that explain this clause, such notices to be provided by the person designated in writing by Bonneville's Administrator with the authority to enter into, administer, modify, suspend or terminate this Agreement, make related determinations and findings and bind Bonneville only to the extent of delegated authority (Contracting Officer).

(4) Snohomish shall, in all solicitations or advertisements for employees placed by or on behalf of Snohomish, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(5) Snohomish shall send, to each labor union or representative or of workers with which it has a collective bargaining agreement or other contract or understanding, the notice provided by the Contracting Officer advising the labor union or workers' representative of Snohomish's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) Snohomish shall comply with Executive Order No. 11246, Sep. 24, 1965 (30 Fed. Reg. 12319), as amended, and the rules, regulations and orders of the Secretary of Labor.

(7) Snohomish shall furnish to Bonneville all information required by Executive Order No. 11246, as amended, and by the rules, regulations and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award of this contract, unless filed within 12 months preceding the date of the award of this contract.



(8) Snohomish shall permit access to its books, records and accounts by Bonneville or the Office of Federal Contract Compliance Programs (OFCCP) for purpose of investigation to ascertain Snohomish's compliance with such rules, regulations and orders.

(9) If the OFCCP determines that Snohomish is not in compliance with this clause or any rule, regulation or order of the Secretary of Labor, this Agreement may be canceled, terminated, or suspended in whole or in part and Snohomish may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order No. 11246, as amended. In addition, sanctions may be imposed and remedies invoked against Snohomish as provided in Executive Order No. 11246, as amended, the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10) Snohomish shall include the terms and conditions of sections 3(b)(1) through 3(b)(11) of this Exhibit in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) Snohomish shall take such action with respect to any subcontract or purchase order as may direct as means of enforcing these terms and conditions, including sanctions for noncompliance: Provided, that if Snohomish becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, Snohomish may request the Government to enter into the litigation to protect the interest of the United States.

(c) Notwithstanding any other clause in this Agreement, disputes relative to this clause will be governed by the procedures in 41 CFR § 66-1.1.

4. Certification of Non-segregated Facilities (48 CFR § 22.810).

(a) Snohomish certifies that it does not and will not maintain or provide for employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. Snohomish agrees that a breach of this certification is a violation of section 3 (the Equal Opportunities Clause) of this Exhibit.

(b) Snohomish agrees that it will (1) obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; (2) retain such certifications in its files (3) forward the following notice to such proposed subcontractors, except where the proposed subcontractors have submitted identical certifications of specific time periods:

"Notice to Prospective Subcontractors of Requirement for  
Certifications of Non-segregated Facilities.

"A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. This certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually)."

5. Officials Not to Benefit (41 U.S.C. § 22).

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement or to any benefit arising from it. However, this clause does not apply to this Agreement to the extent that this Agreement is made with a corporation for the corporation's general benefit.

6. Bonneville's Obligations Not General Obligations of the United States (16 U.S.C. § 839(j)).

None of the offerings of obligations, or promotional materials for such obligations, which may be offered by Snohomish to fund its activities pursuant to this Agreement, shall be construed to be, general obligations of the United States, nor are such obligations intended to be or are they secured by the full faith and credit of the United States.

7. Small Business Act (15 U.S.C. §§ 631 and 637).

(a) It is the policy of the Government that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any federal agency.

(b) Snohomish hereby agrees to carry out the policy set forth in 7(a) in awarding subcontracts to the fullest extent consistent with the efficient performance of this Agreement. Snohomish further agrees to cooperate on any studies or surveys as may be conducted by the United States Small Business Administration or Bonneville as may be necessary to determine the extent of Snohomish's compliance with this clause.

(c) As used in this agreement the term "small business concern" shall mean a small business as defined in section 3 of Small Business Act (15 U.S.C. § 632) and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

(1) which is at least 51 percent owned by one or more socially disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

- (2) whose management and daily business operations are controlled by one or more such individuals.

Snohomish shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans and other minorities, or any other individual found to be disadvantaged by the United States Small Business Administration pursuant to section 8(a) of the Small Business Act.

- (d) Snohomish acting in good faith may rely on written representations by its subcontractor regarding its status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

8. Other Statutes, Executive Orders and Regulations.

- (a) Snohomish agrees to comply with the following statutes, executive orders and regulations to the extent applicable:

(1) False Claims Act, 31 U.S.C. § 3729, et seq. Whoever makes or presents to any person or officer in the civil military or naval service of the United States, or to any department or agency thereof, any claim upon or against the United States, or any department or agency thereof, knowing such claim to be false, fictitious or fraudulent, shall be fined not more than \$10,000.00 or imprisoned not more than 5 years, or both;

(2) Rehabilitation Act of 1973, 29 U.S.C. §793, as amended, Executive Order No. 11758, Jan. 15, 1974, and the regulations of the Secretary of Labor, 41 CFR Part 60-250, et seq., which concern affirmative action for handicapped workers;

(3) Vietnam Era Veterans Readjustment Assistance Act of 1972, 38 U.S.C. §§ 101, 102, 240, 241, 1502, 1504, 1507, as amended, and the clauses contained in 41 CFR Part 60-250, et seq., which concern affirmative action for disabled veterans and veterans of the Vietnam Era;

(4) Executive Order No. 11625, Oct. 13, 1971, and implementing regulations which concern utilization of small disadvantaged business concerns;

(5) Anti-Kickback Act, 41 U.S.C. § 51, et seq.; and

(6) Privacy Act of 1974, 5 U.S.C. § 552a.

(b) Snohomish agrees to comply with requirements deemed necessary by Bonneville in order to implement Bonneville's obligations under the National Historic Preservation Act of 1966, U.S.C. §§ 470, et seq.

### **Bonneville's PNW AC Intertie Costs**

All costs in sections I through VIII of this Exhibit I shall be subject to the following provisions:

#### **PURPOSE**

Bonneville shall determine and calculate Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs with respect to Bonneville's PNW AC Intertie in accordance with this Exhibit I. None of Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, and End of Term Costs (each of the foregoing for purposes of this sentence, a Cost) shall include any other Cost.

#### **SOURCE OF INFORMATION AND COSTS**

Bonneville shall forecast in accordance with this Exhibit I the costs reflected in any Operating Plan pursuant to Schedules A through H of this Exhibit using the most detailed information available to Bonneville from its budget process at the time the forecast is made. Bonneville shall determine the actual costs reflected in any Operating Plan pursuant to Schedules A through H, using Bonneville's then existing accounting system in accordance with this Exhibit I. All costs reflected in Schedules A through H shall be net of credit.

Bonneville shall determine its overall overhead and overall indirect costs. A portion of Bonneville's overall overhead and indirect costs shall be allocated to such total system operations costs (pursuant to section I below), total system maintenance costs (pursuant to section II below), total capital costs (pursuant to sections III and IV below), Other Costs (pursuant to section V below), Contracts and Rates Costs (pursuant to section VI below), Power Scheduling Costs (pursuant to section VII below), and End of Term Costs (pursuant to section VIII below) using Bonneville's

normal allocation or distribution methodologies for such costs, as such methodologies may be changed by Bonneville from time to time. Such allocations or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's PNW AC Intertie than with respect to other transmission facilities.

Bonneville shall record its costs into its accounting systems in accordance with generally accepted accounting principles. For purposes of this Agreement, "generally accepted accounting principles" means the common set of accounting concepts, standards, and procedures that are adopted by entities (such as the utility industry) for purposes of financial statement disclosure.

Whenever Bonneville alters its accounting system or methods to permit costs referred to in this Exhibit I, which were previously allocated to functions and activities, to be directly assigned to function and activities, then in that event Snohomish and Bonneville shall, in concert with the Capacity Owners other than Snohomish, in good faith negotiate revisions to this Exhibit I to include such directly assigned costs.

## **COSTS**

### **I. Operations Costs**

#### **A. Operations Costs - Allocation Factor**

The allocation factor (Schedule A, line 3) used to determine the Allocated Direct Cost of Operations Cost, Indirect Cost of Operations Cost, and Overhead Cost of Operations Cost is the ratio of major facility units (MFUs) of Bonneville's PNW AC Intertie operated by Bonneville to MFUs of the Federal Columbia River Transmission System.

An MFU (Schedule A, lines 1 and 2) is any of the following major pieces of power system equipment which, at any given time, is installed on and is a part of the Federal Columbia River Transmission System: substation switchgear (such as power circuit breakers; potential devices; disconnects, load interrupters, hot-stick operated bus links; switching devices, circuit switchers, ground switches; and switchyard equipment terminals); protective

equipment (such as grounding devices; reactors; arrestors and resistors; voltage regulators; engine generators and motor generators; and high voltage fuses); transformation equipment (such as power transformers; diesel generators; grounding transformers; regulators and shunt reactors; synchronous condensers; and shunt or series capacitors); station equipment (such as switchyard lighting, batteries and chargers, air compressors, station service equipment, and lightening arrestors); instruments, control, and supervisory equipment (such as switchboards, instruments, and control panels; relay panels, transfer trip, and single-pole relaying; and oscillographs; fault detectors and locators; sequential events recorders, supervisory control, and data acquisition equipment; and indicating meters, instruments, and loggers); and equipment specific to direct current and static var compensator stations (such as mercury arc valves; thyristor systems; air handling packages; water control packages; harmonic filtering systems; motor control centers, such as fans, pumps, and dampening resistors; and valve damping resistors); or devices that perform similar types of functions.

Once each fiscal year, Bonneville shall count the number of MFUs on Bonneville's PNW AC Intertie (exclusive of facilities operated by others) (Schedule A, line 1) and the number of MFUs on the Federal Columbia River Transmission System (Schedule A, line 2). In calculating the forecast Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs, Bonneville shall use the most recent MFU count available at the time of such calculation in developing its initial Operating Plan for a given fiscal year. For each Operating Plan which is for the same fiscal year, Bonneville shall use the same MFU count in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**B. Operations Costs - Operations Functionalization Factor**

For each Operating Plan, Bonneville's total system operations direct cost, indirect cost and overhead cost (Schedule A, lines 7, 9, and 11) shall be adjusted by an operations functionalization factor (Schedule A, line 6) so that



Capacity Owners pay only transmission-related system operations costs. The operations functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using the costs developed for the last year of the rate period for which Bonneville has developed rates, the operations functionalization factor shall be the ratio of (a) Bonneville's total system operations cost functionalized to transmission (Schedule A, line 4) over (b) Bonneville's total system operations cost (Schedule A, line 5). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**C. Operations Costs - Allocated Direct Costs**

For each Operating Plan, Bonneville shall allocate its total system operations direct costs as set forth in Schedule A, lines 7 and 8, to determine Allocated Direct Costs of Operations Cost (Schedule A, line 8).

Schedule A, line 7, shall reflect Bonneville's total system operations direct costs for a fiscal year. Bonneville's total system operations direct costs for a fiscal year shall include all system operations expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: substation operations (which provides for, among other things, making equipment adjustments to maintain loads and voltages within acceptable limits, switching to deenergize lines and equipment during maintenance outages, isolating damaged equipment, restoring service to customers, visually inspecting equipment, and reading meters that record line and equipment loading and voltages), power system control and dispatching (which provides for, among other things, central dispatching, control, and monitoring of the electric operation

of the Federal transmission system; load, frequency, and voltage control of Federal generating plants; the operating of the system control and data computers at the Dittmer and Eastern Control Centers; and modification and maintenance of the operation-related computers), and operations standards and engineering (which provides for, among other things, analyzing system loads, voltage levels, outage information, stability levels, and other data; making policy recommendations for system operations; planning operations' practices, restoration plans and disturbance ports; development of control center requirements for centralized automation of substations and generation; and Bonneville's participation with other utilities in developing utility operating standards and guides); and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 8, shall reflect Allocated Direct Cost of Operations Cost.

**D. Operations Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system operations indirect costs as set forth in Schedule A, lines 9 and 10, to determine Indirect Costs of Operations Costs.

Schedule A, line 9, shall reflect Bonneville's total system operations indirect costs for a fiscal year. Bonneville's total system operations indirect costs for a fiscal year shall include all system operations indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: general supervision and management, office support, planning, budgeting, training, direction of facilities' operation, and other system operations activities undertaken by Bonneville that are

consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 10, shall reflect Indirect Cost of Operations Cost.

**E. Operations Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system operations overhead costs as set forth in Schedule A, lines 11 and 12, to determine Overhead Costs of Operations Costs:

Schedule A, line 11, shall reflect Bonneville's total system operations overhead costs for a fiscal year. Bonneville's total system operations overhead costs for a fiscal year shall include all system operations overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system operations overhead activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule A, line 12, shall reflect Overhead Cost of Operations Cost.

Schedule A, line 13, shall reflect Operations Cost.

**II. Maintenance Costs**

**A. Maintenance Costs - Power System Control Maintenance  
Functionalization Factor**

For each Operating Plan, the Power System Control (PSC) maintenance cost (Schedule B, line 4) shall be adjusted by a PSC maintenance functionalization factor (Schedule B, line 3). PSC maintenance is the testing, repair, and engineering support for Bonneville's communications and control systems. The PSC maintenance functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs for the last year of the rate period for which Bonneville has developed rates, the PSC functionalization factor shall be the ratio of (a) Bonneville's total PSC maintenance cost functionalized to transmission from such general rate case (Schedule B, line 1) over (b) Bonneville's total PSC maintenance cost from such general rate case (Schedule B, line 2).

**B. Maintenance Costs - Direct Costs**

The Direct Costs of Maintenance Costs for a fiscal year (Schedule B, line 7) shall be Bonneville's direct costs of maintaining Bonneville's PNW AC Intertie and shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities for maintenance of Bonneville's PNW AC Intertie: transmission line maintenance; substation maintenance; power system control

maintenance; nonelectric plant maintenance; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of Bonneville's PNW AC Intertie undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

With the exception of PSC maintenance costs, Bonneville shall specifically identify the direct costs of maintaining Bonneville's PNW AC Intertie (Schedule B, line 7). To determine PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6), the total PSC direct maintenance cost (Schedule B, line 4) shall be multiplied by (a) the PSC maintenance functionalization factor (Schedule B, line 3) and (b) the MFU allocation factor (Schedule B, line 5) set forth in Schedule A, line 3. The Direct Costs of Maintenance Costs (Schedule B, line 8) shall be the sum of (a) PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6) and (b) the direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost (Schedule B, line 7).

**C. Maintenance Costs - Allocation Factor**

The allocation factor (Schedule B, line 10) used to determine Indirect Cost of Maintenance Cost and Overhead Cost of Maintenance Cost shall be the ratio of the Direct Cost of Maintenance Cost (Schedule B, line 8) to Bonneville's total system maintenance direct cost (Schedule B, line 9), as described below.

Schedule B, line 9, shall reflect Bonneville's total system maintenance direct costs for a fiscal year. Bonneville's total system maintenance direct costs for a fiscal year shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred

by Bonneville in connection with the performance of any of the following activities: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; establishing, monitoring, and updating system maintenance standards, policies, and procedures; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of the Federal Columbia River Transmission System undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 10, shall reflect the percentage which shall be used to allocate Bonneville's total system maintenance indirect cost and total system maintenance overhead cost to Bonneville's PNW AC Intertie.

**D. Maintenance Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance indirect costs as set forth in Schedule B, lines 11 and 12, to determine Indirect Costs of Maintenance Costs.

Schedule B, line 11, shall reflect Bonneville's total system maintenance indirect costs for a fiscal year. Bonneville's total system maintenance indirect costs for a fiscal year shall include all system maintenance indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance any of the following activities: supervision and management, office support, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other system maintenance activities

undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 12, shall reflect Indirect Cost of Maintenance Cost.

**E. Maintenance Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance overhead costs as set forth in Schedule B, lines 13 and 14, to determine Overhead Costs of Maintenance Costs.

Schedule B, line 13, shall reflect Bonneville's total system maintenance overhead costs for a fiscal year. Bonneville's total system maintenance overhead costs for a fiscal year shall include all system maintenance overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system maintenance overhead activities undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule B, line 14, shall reflect Overhead Cost of Maintenance Cost.

Schedule B, line 15, shall reflect Maintenance Cost.

**III. Replacement Costs and Reinforcement Costs**

**A. Replacement Costs and Reinforcement Costs - Direct Costs**

The Direct Costs for Replacements and Reinforcements for a fiscal year (Schedule C, line 1) shall be Bonneville's direct capital costs for Replacements and Reinforcements for such fiscal year and shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, land, materials and equipment, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of the following activities: planning, environmental analyses and mitigation, survey, design, land, materials and equipment, turnkey contracts, contract construction, force account construction, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council. The Direct Costs for any Replacement or Reinforcement for a fiscal year shall also include the costs of removal and any salvage credits with respect to any PNW AC Intertie facility removed on account of such Replacement or Reinforcement.

**B. Replacement Costs and Reinforcement Costs - Indirect Costs and Overhead Costs**

For each Replacement and Reinforcement project, the Indirect Costs and Overhead Costs for Replacements and Reinforcements (Schedule C, line 2) shall be allocated or distributed to such Replacements and Reinforcements using the indirect and overhead allocation and distribution methodologies



employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Replacements and Reinforcements are under construction. Schedule C, line 2, shall reflect the Indirect Costs and Overhead Costs of Replacements and Reinforcements.

Indirect Costs of Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel expenses, service contracts, consulting contracts, administration of materials, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: supervision, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Overhead Costs for Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other costs, each of which being which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services;

area offices; operations, maintenance, and construction; and engineering); and (c) other replacement and reinforcement activities undertaken by Bonneville that are consistent with replacement and reinforcement activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

**C. Replacement Costs and Reinforcement Costs - Allowance for Funds Used During Construction (AFUDC)**

Schedule C, line 3, shall reflect AFUDC for Replacements and Reinforcements. At the beginning of each fiscal year, Bonneville shall calculate the AFUDC rate for such fiscal year. Bonneville shall apply such AFUDC rate monthly to the costs in accounts for construction work in progress for Replacements and Reinforcements.

**D. Replacement Costs and Reinforcement Costs - Interest**

Schedule C, line 4, shall reflect the interest cost payable by Snohomish pursuant to this Agreement with respect to any Replacement or Reinforcement. Such interest cost for any Replacement or any Reinforcement shall be simple interest calculated at a rate equal to the weighted average interest rate on Bonneville's then outstanding bonds or other debt instruments and such interest shall accrue from the date Bonneville stops accruing AFUDC (approximately the date the work order for such Replacement or such Reinforcement is closed) with respect to such Replacement or such Reinforcement to the due date of the monthly power bill containing the charge for such Replacement or such Reinforcement.

**IV. General Plant Costs**

For each Operating Plan, Bonneville shall adjust, amortize, and allocate Bonneville's total general plant investment (as described below) and Bonneville's Dittmer control equipment investment as set forth in Schedule D, lines 1 through 11, to determine General Plant Cost.

Schedule D, line 1, shall reflect for a fiscal year Bonneville's total cumulative general plant investment. Bonneville's total general plant investment shall include Bonneville's investments in any of the following: land-general plant, structures/improvements-general plant, office furniture and equipment, transportation equipment, stores equipment, tools/shop/garage equipment, laboratory equipment, power operated equipment, communication equipment, miscellaneous equipment (including equipment or apparatus used in Bonneville's utility operations which are not includable in any other general plant investment category), and other similar investment made by Bonneville that is consistent with general plant investment made by utilities in the Western Systems Coordinating Council.

Schedule D, line 2, shall reflect for a fiscal year Bonneville's cumulative investment in Dittmer control equipment.

Schedule D, line 3, shall reflect Bonneville's total general plant investment and Bonneville's Dittmer control equipment investment functionalized to generation using the methodology for functionalizing general plant as set forth in Bonneville's general rate case most recently approved by FERC on an interim basis.

Schedule D, line 4, shall reflect any general plant investment recovered from all Capacity Owners under the CO-94 rate as such general plant investment is unitized by Bonneville; provided, however, for the first two Operating Plans Bonneville shall estimate the amount of the general plant investment included in the Initial Capacity Ownership Price, which estimate shall be reflected in Schedule D, line 4, and Bonneville shall modify such Operating Plans by December 1995, or as soon as practicable thereafter, to reflect in Schedule D, line 4, the actual general plant investment included in the Adjusted Capacity Ownership Price.

Schedule D, line 5, shall reflect any general plant investment recovered from Capacity Owners pursuant to section 5 for Upgrades. The agreements

referred to in subsection 5(d) and subparagraph 5(e)(3)(B) shall specify the portion of costs of an Upgrade that will be considered general plant investment.

Schedule D, line 6, shall reflect Bonneville's adjusted general plant investment functionalized to transmission and shall be calculated by adding line 1 and line 2, and from the sum of line 1 and line 2 subtracting line 3, line 4, and line 5.

Schedule D, line 7, shall reflect Bonneville's annual cost of Bonneville's adjusted general plant investment functionalized to transmission (Schedule D, line 6). Such annual cost shall be the sum of the annual interest and amortization amounts for each category of adjusted general plant investment. The annual interest and amortization amounts for each category shall be calculated by using the investment amounts for each such category, the weighted average interest rate for all Bonneville then outstanding bonds, and the average service lives for each such category from Bonneville's most recent depreciation study. If Bonneville changes its practice of financing general plant investment with bonds, the interest rate used in the calculation referred to in the immediately preceding sentence shall reflect the weighted average interest rate for all of Bonneville's then outstanding debt instruments.

Schedule D, line 8, shall reflect for a fiscal year Bonneville's total cumulative transmission plant-in-service investment (not including general plant investment). Bonneville's total transmission plant-in-service investment shall include Bonneville's investment in any of the following items reflected as total transmission plant-in-service (not including general plant investment) in the Segmentation Study (from Bonneville's general rate case most recently approved by FERC on an interim basis: land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant

investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

Schedule D, line 9, shall be the annual cost ratio of Bonneville's PNW AC Intertie transmission-related general plant derived by dividing Schedule D, line 7, by Schedule D, line 8.

Schedule D, line 10, shall reflect Bonneville's PNW AC Intertie investment. Bonneville's PNW AC Intertie investment shall include Bonneville's investment in any of the following items reflected as Bonneville's PNW AC Intertie plant-in-service in the Segmentation Study from Bonneville's general rate case most recently approved by FERC on an interim basis (or the successor to the Segmentation Study, as determined by Bonneville): land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

**V. Other Costs**

For each Operating Plan, Bonneville shall include Other Costs associated with Bonneville's PNW AC Intertie for a fiscal year. Such Other Costs (Schedule E, line 3) for a fiscal year shall include for such fiscal year any of the following: (1) the costs of operation; maintenance; capital replacements, reinforcements, additions, betterments, renewals; or related costs which Bonneville is obligated to pay pursuant to the Northwest Intertie Agreements or other contracts referred to in subsection 8(b) of this Agreement; and (2) costs paid by Bonneville including monetary judgments, settlements, binding awards, non-contract penalties, contract penalties, liquidated damages, or forfeiture costs, and Bonneville's costs related to such monetary judgments, settlements, binding awards, non-contract penalties, contract penalties,

liquidated damages, or forfeiture costs assessed against or incurred by Bonneville as a facilities owner of, or the operator of, the PNW AC Intertie; provided, however, that Snohomish shall not be obligated to pay a share of any such costs that are not properly allocated to Bonneville's PNW AC Intertie.

Bonneville shall forecast its share of operations, maintenance, capital, and related costs for activities that PacifiCorp performs on Bonneville/PacifiCorp jointly-owned PNW AC Intertie facilities based on forecasts received from PacifiCorp or on actual costs for the most recent 12 consecutive month period prior to preparation of an Operating Plan.

**VI. Contracts and Rates Costs**

**A. Contracts and Rates Costs - Functionalization Factor**

For each Operating Plan, Bonneville's total contracts and rates direct costs, indirect costs, and overhead costs (Schedule F, lines 5, 6, and 7) shall be adjusted by a contracts and rates functionalization-factor (Schedule F, line 3). The contracts and rates functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the contracts and rates functionalization factor shall be the ratio of (a) Bonneville's total transmission-related contracts and rates cost (Schedule F, line 1) over (b) Bonneville's total contracts and rates cost (Schedule F, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Contracts and Rates Cost.

**B. Contracts and Rates Costs - Allocation Factor**

The allocation factor (Schedule F, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Contracts and Rates Costs - Total Contracts and Rates Costs**

Bonneville's total contracts and rates costs for a fiscal year (Schedule F, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: rate filings with FERC, development of rates customers pay Bonneville for electric power and for wheeling their own power on Bonneville's transmission system; negotiation, administration, and coordination of contracts for power sales, power exchanges, conservation, wheeling and resource services; and analyzing, processing, and issuing all customer power bills; and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule F, line 9, shall reflect Contracts and Rates Cost.

**VII. Power Scheduling Costs**

For each Operating Plan, Bonneville's total power scheduling direct costs, indirect costs, and overhead costs (Schedule G, lines 5, 6, and 7) shall be adjusted by a power scheduling functionalization factor (Schedule G, line 3). The power scheduling functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the power scheduling functionalization factor shall be the ratio of (a) Bonneville's total transmission-related power scheduling cost (Schedule G, line 1) over (b) Bonneville's total power scheduling cost (Schedule G, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Power Scheduling Cost.

**B. Power Scheduling Costs - Allocation Factor**

The allocation factor (Schedule G, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Power Scheduling Costs - Total Power Scheduling Costs**

Bonneville's total power scheduling costs for a fiscal year (Schedule G, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: scheduling and marketing power to Bonneville customers and interconnected utilities, forecasting the hourly power requirements of Bonneville customers and the interchange of power with the region's interconnected electric utilities and with utilities outside the region, scheduling power to be generated at each Federal plant, weather and streamflow forecasting, controlling the reservoirs, implementing the intertie access policy, coordinating power production with the multi-purpose operation of the Federal power system, seasonal load/resource planning, developing current short-term operating plans, short-term marketing of Bonneville's surplus firm power, exchanges, and nonfirm energy, and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule G, line 9, shall reflect Power Scheduling Cost.

**VIII. End of Term Costs**



When all facilities of the PNW AC Intertie are determined, in accordance with Northwest Intertie Agreements, to be no longer operable, Bonneville shall include a forecast of all Bonneville's costs associated with decommissioning the PNW AC Intertie and credits resulting from such decommissioning in the Operating Plan for each fiscal year that such End of Term Costs are to be incurred. Bonneville's End of Term Costs for a fiscal year (Schedule H, line 4) shall include Bonneville's costs (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: decommissioning, razing structures, disposal of debris, site restoration, meeting all requirements of Federal, state, or local applicable law relating to the foregoing activities, and other decommissioning activities undertaken by Bonneville that are consistent with decommissioning activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

**Schedule A for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Inter tie	1		_____	
MFUs of the FCRTS	2		_____	
Allocation factor (Line 1/Line 2)	3		_____	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from rate case	4		_____	
Bonneville's total system operations cost from rate case	5		_____	
Operations functionalization factor (Line 4/Line 5)	6		_____	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	_____	_____	_____
Allocated Direct Cost of Operations Cost (Line 3 * Line 6 * Line 7)	8	_____	_____	_____

	Line No.	Forecast	Actual	Difference
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	_____	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	_____	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	_____	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	_____	_____	_____
<b>F. Operations Cost</b> <b>(Lines 8 + 10 + 12)</b>	13	_____	_____	_____

**Schedule B for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC)</b>				
<b>Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1		_____	
Bonneville's total PSC maintenance cost from rate case	2		_____	
PSC maintenance functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	_____	_____	_____
MFU Allocation Factor (Schedule A, line 3)	5		_____	
PSC direct maintenance cost for Bonneville's PNW AC Intertie (Line 4 * Line 3 * Line 5)	6	_____	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	_____	_____	_____
Direct Cost of Maintenance Cost (Line 6 + Line 7)	8	_____	_____	_____

**C. Allocation Factor**

Bonneville's total system maintenance direct cost	9	_____	_____	_____
Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9)	10	_____	_____	_____

**D. Indirect Cost**

Bonneville's total system maintenance indirect cost	11	_____	_____	_____
Indirect Cost of Maintenance Cost (Line 11 * Line 10)	12	_____	_____	_____

**E. Overhead Cost**

Bonneville's total system maintenance overhead cost	13	_____	_____	_____
Overhead Cost of Maintenance Cost (Line 13 * Line 10)	14	_____	_____	_____

**F. Maintenance Cost  
(Lines 8 + 12 + 14)**

	15	_____	_____	_____
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**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>	<b>5</b>	_____	_____	_____

**Notes:**

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.

Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4	_____	_____	_____
<b>E. Total Replacement Costs and Reinforcement Costs (Lines 1 + 2 + 3 + 4)</b>	5	_____	_____	_____

**Notes:**

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.

Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

**Schedule D for FY XXXX**

	Line No.	Allocated Actual
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment	1	_____
Bonneville's Dittmer control equipment investment	2	_____
General plant investment of lines 1 and 2 functionalized to generation	3	_____
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price	4	_____
General plant investment recovered from Capacity Owners for Upgrades	5	_____
Adjusted general plant investment functionalized to transmission (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	_____
BPA total annual cost of Line 6 general plant investment	7	_____
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study	8	_____
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8)	9	_____
Bonneville's PNW AC Intertie investment from Segmentation Study	10	_____
<b>General Plant Cost (Line 9 * Line 10)</b>	11	_____



**Schedule E for FY XXXX**

	Line No	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	_____	_____	_____
<b>B. Other PNW AC Interlie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	_____	_____	_____

Schedule F for FY XXXX

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates Costs</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1		_____	
Total contracts and rates cost from rate case	2		_____	
Contracts and rates cost functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4		_____	
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	_____	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	_____	_____	_____
Bonneville's total contracts and rates costs (Line 5 + Line 6 + Line 7)	8	_____	_____	_____
<b>D. Contracts and Rates Cost (Line 8 * Line 3 * Line 4)</b>	9	_____	_____	_____

**Schedule G for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VII. Power Scheduling Costs</b>				
<b>A. Power Scheduling Functionalization Factor</b>				
Transmission-related power scheduling costs from rate case	1			
Total power scheduling cost from rate case	2			
Power scheduling cost functionalization factor (Line 1/Line 2)	3			
<b>B. Allocation Factor</b>				
MFU allocation factor (Schedule A, line 3)	4			
<b>C. Total Power Scheduling Costs</b>				
Power scheduling direct costs	5			
Power scheduling indirect costs	6			
Power scheduling overhead costs	7			
Bonneville's total power scheduling costs (Line 5 + Line 6 + Line 7)	8			
<b>D. Power Scheduling Cost (Line 8 * Line 3 * Line 4)</b>	9			

**Schedule H for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	_____	_____	_____
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	(      )	(      )	(      )
<b>D. End of Term Costs</b>				
	4	_____	_____	_____

**Snohomish's Initial Transaction with California Utility**

Name of parties: Snohomish / Sacramento Municipal Utility District

Term of Contract: September 30, 2007

Date of Execution: May 26, 1993

Amount of Transaction (MW): 42 MW

**PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT**

executed by the

**UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

acting by and through the

**BONNEVILLE POWER ADMINISTRATION**

and

**PACIFICORP**

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Exhibit A	(CO-94, AC-93, IS-93 Rate Schedules and General Transmission Rate Schedule Provisions)
Exhibit B	(Annual Costs Rate)
Exhibit C	(Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share)
Exhibit D	(Lump Sum Payment Calculation)
Exhibit E	(Transmission Loss Factors)
Exhibit F	(Bonneville's PNW AC Intertie)
Exhibit G	(Capacity Owners)
Exhibit H	(Provisions Required by Statute or Executive Order)
Exhibit I	(Bonneville's PNW AC Intertie Costs)
Exhibit J	(PacifiCorp's Initial Transaction with California Utility)

This PNW AC INTERTIE CAPACITY OWNERSHIP AGREEMENT (Agreement) is entered into as of December 23, 1994, by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (Bonneville or BPA) and the PACIFICORP (PacifiCorp), a corporation operating and existing under the laws of the state of Oregon. Each of Bonneville and PacifiCorp is sometimes referred to individually in this Agreement as "Party"; Bonneville and PacifiCorp are sometimes referred to together in this Agreement as "Parties."

W I T N E S S E T H :

WHEREAS Bonneville, Portland General Electric Company (Portland), and PacifiCorp (PacifiCorp) planned and constructed improvements and additions to the Northwest portion of the PNW-PSW Intertie; and

WHEREAS such construction was completed in December 1993 resulting in 1600 MW of additional PNW AC Intertie Rated Transfer Capability in a north-to-south direction and 1225 MW of additional PNW AC Intertie Rated Transfer Capability in a south-to-north direction; and

WHEREAS pursuant to the Northwest Intertie Agreements, Bonneville operates the PNW AC Intertie, in coordination with Portland and PacifiCorp, as a single system so as to maximize PNW AC Intertie Rated Transfer Capability and Operational Transfer Capability consistent with Prudent Utility Practice; and

WHEREAS Bonneville has developed a proposal to offer to PNW non-Federal scheduling utilities and joint agencies capacity ownership rights in 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability; and

WHEREAS such proposal has been studied in Bonneville's Final Non-Federal Participation Environmental Impact Statement, dated January 1994, and was the selected alternative in the Administrator's Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville and PacifiCorp executed a Memorandum of Understanding, DE-MS79-91BP93469, dated September 18, 1991, which, among other things, sets forth the principles for PacifiCorp's capacity ownership rights in Bonneville's PNW AC Intertie; and

WHEREAS interest expressed in capacity ownership by PNW non-Federal scheduling utilities and joint agencies exceeded the 725 MW of Bonneville's PNW AC Intertie Rated Transfer Capability offered by Bonneville, and as a result Bonneville developed and applied an allocation methodology selected in the Administrator's Capacity Ownership Record of Decision, dated March 25, 1994; and

WHEREAS Bonneville is authorized pursuant to law to dispose of electric power generated at various Federal hydroelectric projects in the PNW, or acquired from other resources, to construct and operate transmission facilities, to provide transmission and other services, and to enter into agreements to carry out such authority;

NOW, THEREFORE, Bonneville and PacifiCorp agree as follows:



## 1. DEFINITIONS

- (a) "Adjusted Capacity Ownership Price" means the price calculated pursuant to column 2, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (b) "Adjusted Lump Sum Payment" means the Adjusted Capacity Ownership Price multiplied by PacifiCorp's Capacity Ownership Share (in kilowatts), as described with more particularity in section D of Exhibit D.
- (c) "Allocated Direct Costs" means for each fiscal year the Operations Cost as allocated to Bonneville's PNW AC Intertie in accordance with section I.C of Exhibit I for such fiscal year. Allocated Direct Costs are not included in Direct Costs, Indirect Costs, or Overhead Costs.
- (d) "Allowance for Funds Used During Construction" or "AFUDC" constitutes interest on the funds used for utility plant under construction. The AFUDC rate approximates the cost of money being used to finance current construction work in progress and is calculated in accordance with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors. AFUDC shall be capitalized in accordance with Bonneville's accounting procedures and practices, and in any event consistent with FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions 3.A(17), or its successors.
- (e) "Billing Provisions" means those provisions set forth in Exhibit B, Part B.
- (f) "Bonneville's PNW AC Intertie" means facilities of the PNW AC Intertie owned partially or entirely by Bonneville specified in Exhibit F together with the equipment and facilities installed in or connected to such facilities specified in Exhibit F, to the extent such facilities are necessary for the transmission of power on the PNW AC Intertie.

- (g) "Bonneville's PNW AC Intertie Operational Transfer Capability" means Bonneville's PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and by operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice) resulting from, among other things, line or equipment outages, stability limits, or loopflow.
- (h) "Bonneville's PNW AC Intertie Rated Transfer Capability" means Bonneville's share of the PNW AC Intertie Rated Transfer Capability as determined in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (i) "Capacity Owner" means each of the parties listed in Exhibit G to the extent that such party has entered into a Capacity Ownership Agreement.
- (j) "Capacity Ownership Agreement" means, in the singular, this Agreement or the agreement, substantially identical to this Agreement, entered into by each Capacity and Bonneville, and in the plural, this Agreement and all such substantially identical agreements entered into respectively by Capacity Owners and Bonneville, as each such agreement may be amended or supplemented from time to time pursuant to the terms of such agreement, concerning (among other things) the rights of such Capacity Owner with respect to the PNW AC Intertie.

- (k) "Capacity Ownership Percentage" means, as of the Effective Date, in the singular, the percentage of Bonneville's PNW AC Intertie Rated Transfer Capability owned by PacifiCorp pursuant to this Agreement, which percentage is determined by dividing PacifiCorp's Capacity Ownership Share as of the Effective Date by Bonneville's PNW AC Intertie Rated Transfer Capability as of the Effective Date (such percentage being subject to change pursuant to the terms of this Agreement), and in the plural, the percentages of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which percentages are set forth in Exhibit G (each of such percentages being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (l) "Capacity Ownership Rights" means the rights of PacifiCorp pursuant to this Agreement.
- (m) "Capacity Ownership Share" means, except as such term is otherwise used in sections III.A and III.B of the CO-94 rate set forth in Exhibit A on the Effective Date, in the singular, the MW amount of Bonneville's PNW AC Intertie Rated Transfer Capability owned by PacifiCorp pursuant to this Agreement, which MW amount is set forth in Exhibit C (such amount being subject to change pursuant to the terms of this Agreement), and in the plural, the MW amounts of Bonneville's PNW AC Intertie Rated Transfer Capability owned by the other Capacity Owners, respectively, pursuant to their respective Capacity Ownership Agreements (other than this Agreement), which amounts are set forth in Exhibit G (each of such amounts being subject to change pursuant to the respective terms of such Capacity Ownership Agreements).
- (n) "Committee" has the meaning set forth in subsection 12(a).
- (o) "Contracts and Rates Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year

Bonneville's total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville's PNW AC Intertie.

- (p) "Direct Costs" means any costs incurred by Bonneville which are readily identifiable, or obviously traceable to, and directly benefit, a specific Bonneville program, project, or other cost objective. Direct Costs are not included in Allocated Direct Costs, Overhead Costs, or Indirect Costs. The methods for determining Direct Costs for Bonneville's PNW AC Intertie are set forth in sections II.B and III.A of Exhibit I.
- (q) "Effective Date" means the date as of which this Agreement becomes effective pursuant to section 2.
- (r) "End of Term Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.
- (s) "FERC" means the Federal Energy Regulatory Commission or its regulatory successor.
- (t) "General Plant Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville's general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.
- (u) "GTRSP" or "GTRSPs" means Bonneville's General Transmission Rate Schedule Provisions, set forth in Exhibit A, as such provisions may be revised from time to time.

- (v) "Indirect Costs" means any costs incurred by Bonneville which indirectly benefit and are directly charged to a specific Bonneville program, project, or other cost objective for which a Direct Cost or Allocated Direct Cost is charged. Indirect Costs shall not be included in Allocated Direct Costs, Direct Costs, or Overhead Costs. The methods for determining Indirect Costs for Bonneville's PNW AC Intertie are set forth in sections I.D, II.D, and III.B of Exhibit I.
- (w) "Initial Capacity Ownership Price" means \$215 per kilowatt, the calculation of which charge is set forth in column 1, section B of Exhibit D and in section III.A of the CO-94 rate in Exhibit A.
- (x) "Initial Lump Sum Payment" means the Initial Capacity Ownership Price multiplied by PacifiCorp's Capacity Ownership Share (in kilowatts), as described with more particularity in section C of Exhibit D.
- (y) "Interconnection Agreement" means the "Interim Interconnection Agreement Between Certain California-Oregon Transmission Project Participants and Northwest Participants," Contract No. DE-MS79-91BP93158, as amended or superseded.
- (z) "Joint AC Intertie" is as defined in the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (aa) "Joint Intertie Scheduling Office" or "JISO" means the group of Bonneville, Portland, and PacifiCorp schedulers, which, among other things, accepts PNW-PSW Intertie Preschedules.
- (bb) "Maintenance Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville's PNW AC Intertie, maintenance Indirect Costs for Bonneville's PNW AC Intertie, and maintenance Overhead Costs for Bonneville's PNW AC Intertie for

such fiscal year, each being determined in accordance with section II of Exhibit I.

- (cc) "MW" means megawatt.
- (dd) "Northwest Intertie Agreements" means the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof.
- (ee) "Operating Plan" means, subject to subsection 13(o), with respect to any fiscal year commencing on or after the day on which the annual costs rate set forth in Exhibit B has been approved on an interim or final basis by FERC, the written document containing the information described in subsection 13(c), as such document may be amended pursuant to section 13, 14, or 16.
- (ff) "Operations Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville's PNW AC Intertie, operations Indirect Costs for Bonneville's PNW AC Intertie, and operations Overhead Costs for Bonneville's PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.
- (gg) "Other Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's other costs for Bonneville's PNW AC Intertie described in and determined pursuant to section V of Exhibit I.
- (hh) "Overhead Cost" means administrative and general costs, support service costs, or other costs similar in nature which are distributed or allocated by Bonneville to Bonneville's PNW AC Intertie. Overhead Costs are not included in Direct Costs, Allocated Direct Costs, or

**Indirect Costs.** The methods for determining Overhead Costs are set forth in sections I.E, II.E, and III.B of Exhibit I.

- (ii) "Pacific Northwest" or "PNW" means the area defined as the Pacific Northwest in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. section 839a(14).
- (jj) "Pacific Time" means Pacific Standard Time and Pacific Daylight Time as each is in force.
- (kk) "PNW AC Intertie" means facilities including, but not limited to, the following: two 500 kV transmission lines extending from John Day Substation to the Malin Substation and to the California-Oregon border; portions of John Day, Grizzly, and Malin Substations and the Sand Springs, Fort Rock, and Sycan Compensation Stations; a portion of the Buckley-Summer Lake 500 kV transmission line and associated substations; portions of the Buckley-Marion and Marion-Alvey 500 kV transmission lines and associated facilities; a portion of Bonneville's capacity rights in the Summer Lake-Malin 500 kV transmission line; Bonneville's rights in the Meridian-Malin 500 kV transmission line and Bonneville's share of ownership of the Alvey-Meridian 500 kV transmission line; Captain Jack Substation; the 500 kV transmission line from Captain Jack Substation to the California-Oregon border; and any modifications, additions, improvements, or other alterations thereto.
- (ll) "PNW AC Intertie Operational Transfer Capability" means the PNW AC Intertie Rated Transfer Capability as reduced by limitations beyond the control of the Parties, and operational limitations (as determined by Bonneville in accordance with the agreement between Bonneville and PacifiCorp, Contract No. DE-MS79-94BP94332, as amended from time to time pursuant to the terms thereof, and with the agreement between Bonneville and Portland, Contract No. DE-MS79-87BP92340, as amended from time to time pursuant to the terms thereof, and in accordance with Prudent Utility Practice)

resulting from, among other things, line or equipment outages, stability limits, or loopflow.

- (mm) "PNW AC Intertie Rated Transfer Capability" means the north-to-south and south-to-north capability of the PNW AC Intertie to transfer power in a reliable manner as determined consistent with Prudent Utility Practice.
- (nn) "Pacific Northwest-Pacific Southwest Intertie" or "PNW-PSW Intertie" means the DC transmission line between the Celilo Converter Station in The Dalles, Oregon, and the Sylmar Converter Station near Los Angeles, California, the PNW AC Intertie, and the AC Intertie in California including, without limitation, the California-Oregon Transmission Project.
- (oo) "Pacific Northwest Non-Federal Utility" means any electric utility that serves retail load in the region consisting of (1) the states of Oregon, Oregon, and Idaho, the portion of the state of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River Basin drainage basin, and (2) any contiguous areas, not in excess of seventy-five air miles from the area referred to in (1) above, which areas are a part of the service area of a rural electric cooperative power customer served by Bonneville on the effective date of the Pacific Northwest Power Planning and Conservation Act (P.L. 96-501) having a distribution system from which it serves both within and without such region.
- (pp) "Power Scheduling Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville's total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville's PNW AC Intertie.
- (qq) "Preschedule" means the schedule submitted by PacifiCorp to the JISO pursuant to paragraph 4(b)(1) for transactions prepared each



Working Day for the period beginning 2400 hours of the current Working Day through 2400 hours of the next Working Day.

- (rr) "Prudent Utility Practice" means, at any particular time, the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto that would achieve the desired result or, if there are no such practices, methods, and acts, the practices, methods, and acts which, in the exercise of reasonable judgment in the light of facts known at the time the decision was made, could have been expected to achieve the desired result consistent with reliability and safety.
- (ss) "Real-time Schedule" means a schedule, or change to the Preschedule, submitted during the period which begins when the Preschedule is deemed by the JISO to be complete and concludes at 2400 hours on the day for which the Preschedule is submitted by PacifiCorp.
- (tt) "Reinforcement" means any transmission plant modification, addition, improvement, or other alteration to the Federal Columbia River Transmission System which is not a Replacement or an Upgrade and which is made pursuant to subsection 7(c).
- (uu) "Reinforcement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to PacifiCorp for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Reinforcement. Reinforcement Costs do not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

- (vv) "Replacement" means for any transmission plant addition, betterment, renewal and equipment or facility that takes the place of or adds to any existing equipment or facility on Bonneville's PNW AC Intertie that does not increase Bonneville's PNW AC Intertie Rated Transfer Capability.
- (ww) "Replacement Costs" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to PacifiCorp for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit with respect to any PNW AC Intertie facility removed on account of such Replacement. General Plant Cost is not included in Replacement Costs. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.
- (xx) "Revised Adjusted Capacity Ownership Price" means a price calculated pursuant to column 3, section B of Exhibit D and section IV.B of the CO-94 rate in Exhibit A.
- (yy) "Revised Adjusted Lump Sum Payment" means a Revised Adjusted Capacity Ownership Price multiplied by PacifiCorp's Capacity Ownership Share (in kilowatts), as described with more particularity in section E of Exhibit D.
- (zz) "Scheduler" means the person authorized by a Party to accept or submit schedules pursuant to section 4 and authorized to implement, interpret, and vary the scheduling procedures set forth in such section pursuant to this Agreement.
- (aaa) "Scheduling Percentage" means the percentage of the PNW AC Intertie Rated Transfer Capability owned by PacifiCorp pursuant to this Agreement, which percentage is determined by dividing

PacifiCorp's Capacity Ownership Share by the PNW AC Intertie Rated Transfer Capability.

- (bbb) "Scheduling Share" means, for any given hour, the MW amount equal to the product of PacifiCorp's Scheduling Percentage and the PNW AC Intertie Operational Transfer Capability for such hour.
- (ccc) "Scheduling Utility" means either (i) a Pacific Northwest Non-Federal Utility that serves a retail service area and operates a generation control area, or (ii) a Pacific Northwest Non-Federal Utility designated by Bonneville as a "computed requirements customer" or its equivalent.
- (ddd) "Term" means the period of effectiveness of this Agreement set forth in subsection 2(a).
- (eee) "Third AC Intertie" means the Third AC Intertie Project, which project increased the PNW AC Intertie Rated Transfer Capability by 1600 MW in a north-to-south direction and by 1225 MW in a south-to-north direction.
- (fff) "Third AC Intertie Project" means the Third AC Intertie System Reinforcement and the construction of the Alvey-Meridian 500 kV transmission line and of facilities related to such transmission line during the period from July 1984 through December 1993.
- (ggg) "Third AC Intertie System Reinforcement" means the improvements, additions and modifications to the PNW AC Intertie constructed during the period from July 1984 through December 1993 plus the construction of the Captain Jack substation and of facilities related to such substation during the period from July 1984 through December 1993.
- (hhh) "Upgrade" means any MW increase to Bonneville's PNW AC Intertie Rated Transfer Capability which arises from or is related to an increase to the PNW AC Intertie Rated Transfer Capability.

- (iii) "Working Day" means any day other than Saturday, Sunday, and a legal holiday recognized by the Federal government or PacifiCorp.

## 2. TERM AND TERMINATION

- (a) This Agreement shall become effective as of the date of execution and delivery of this Agreement by both of the Parties. This Agreement shall continue in effect so long as any facilities of the PNW AC Intertie are in existence and operable, unless otherwise earlier terminated by written agreement of both of the Parties or unless terminated pursuant to the terms of this Agreement. All liabilities incurred under this Agreement shall be preserved until satisfied.
- (b) Notwithstanding subsection 2(a), no Capacity Ownership Rights may be exercised by PacifiCorp until payment is made by PacifiCorp pursuant to paragraph 9(a)(1) and received by Bonneville.
- (c) If Bonneville does not receive the payment from PacifiCorp pursuant to paragraph 9(a)(1), then Bonneville shall have the option to terminate this Agreement by delivering to PacifiCorp written notice of such termination.
- (d) Notwithstanding subsection 2(a), if Bonneville incurs End of Term Costs, the following provisions of this Agreement, and all rights and obligations thereunder, shall continue in full force and effect until Bonneville renders its final bill to PacifiCorp pursuant to subsection 9(b), unless this Agreement is earlier terminated by mutual agreement of the Parties: subsections 2(b), 2(c), and 2(d), sections 1, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, and 23, and Exhibits A, B, C, D, F, G, H, and I. All liabilities incurred under such provisions of this Agreement shall be preserved until satisfied.
- (e) If this Agreement has not become effective pursuant to subsection 2(a) within 12 months following the date upon which Bonneville executes

and delivers this Agreement to PacifiCorp, this Agreement shall be void ab initio and of no force or effect.

### 3. **CAPACITY RIGHTS**

#### (a) **Purchase and Sale of Capacity**

Pursuant to the terms and conditions of this Agreement, PacifiCorp purchases from Bonneville and Bonneville sells to PacifiCorp the Capacity Ownership Rights.

#### (b) **Right to Wheel for Third Parties**

No later than 30 days after the Effective Date, PacifiCorp shall notify Bonneville in writing of PacifiCorp's decision to utilize its Scheduling Share pursuant to either paragraph 3(b)(1) or paragraph 3(b)(2), and PacifiCorp shall have the right to utilize its Scheduling Share pursuant to the paragraph PacifiCorp elects. Prior to Bonneville's receipt of such notification, PacifiCorp shall utilize its Scheduling Share pursuant to paragraph 3(b)(1). If PacifiCorp fails to make an election within the prescribed time period, PacifiCorp shall be deemed to have elected the option set forth in paragraph 3(b)(1).

#### (1) **No Third Party Wheeling**

- (A) Except as expressly provided in subparagraph 3(b)(1)(B), PacifiCorp shall not use its Scheduling Share to transmit power or energy (except for inadvertent power flows) that PacifiCorp does not own at the California-Oregon border or for which transmission PacifiCorp receives any revenue that would be reportable in PacifiCorp's accounting system where revenues received for wheeling for other entities would be booked.

(B) If PacifiCorp's Scheduling Share is not fully utilized by PacifiCorp in any hour, Bonneville may schedule for such hour Bonneville's transactions (including, without limitation, Bonneville wheeling for other entities) and wheel such transactions over the unused portion of PacifiCorp's Scheduling Share for such hour but no longer than such hour. PacifiCorp shall be compensated for such wheeling solely by the payments as described in sections 3(b)(1)(B)(i) and (ii) below. For purposes of this subparagraph 3(b)(1)(B), PacifiCorp's Scheduling Share shall be deemed to be not fully utilized in a given hour to the extent that PacifiCorp has not scheduled, or does not schedule, on a Preschedule or Real-time Schedule basis, any transaction for such hour on any MW amount of PacifiCorp's Scheduling Share. In return for PacifiCorp's Scheduling Share being made available to Bonneville pursuant to this subparagraph 3(b)(1)(B), Bonneville shall pay PacifiCorp

(i) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a north-to-south direction under the IS-93 rate, section II.A, or its successor to other entities in such hour, and (2) the ratio of PacifiCorp's unused Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour, and

(ii) an amount equal to the product of (1) all wheeling revenues received by Bonneville from providing short term wheeling in a south-to-north direction under the IS-93 rate, section II.A or its successor to other entities in such hour, and (2) the ratio of PacifiCorp's unused

Scheduling Share in such hour to the total amount of PNW AC Intertie Operational Transfer Capability made available by Bonneville for such wheeling in such hour; provided, however, that Bonneville shall not be required to make payments for such south-to-north wheeling pursuant to this section 3(b)(1)(B)(ii) earlier than two years after the Effective Date.

Bonneville shall make payments pursuant to this subparagraph 3(b)(1)(B) in accordance with paragraph 9(f)(1).

- (C) During an outage resulting from maintenance activities on the PNW AC Intertie performed by Bonneville other than maintenance activities undertaken due to emergencies or uncontrollable forces, the following shall apply:
  - (i) When PacifiCorp's Scheduling Share for any given hour is reduced as a consequence of such outage which reduces in Bonneville's PNW AC Intertie Operational Transfer Capability such that PacifiCorp's Scheduling Share for such hour is less than the MW amount of the aggregate of PacifiCorp's net firm transactions identified by PacifiCorp to Bonneville pursuant to section 3(b)(1)(C)(iv) for such hour, Bonneville shall, subject only to sections 3(b)(1)(C)(ii) and (iii) and to the immediately succeeding sentence, wheel on a firm basis that portion of PacifiCorp's firm transactions that equals the difference between PacifiCorp's Scheduling Share for such hour and the MW amount of the aggregate of PacifiCorp's firm transactions for such hour up to, but not in

excess of, PacifiCorp's Capacity Ownership Share. Notwithstanding the foregoing, Bonneville shall only be obligated to provide such wheeling to the extent that each party with whom PacifiCorp is conducting such firm transactions has received a sufficient AC Intertie capacity allocation in California to accommodate such transactions. PacifiCorp shall pay the IS-93 rate, section II.A, or its successor for such wheeling pursuant to this section 3(b)(1)(C)(i) in accordance with subsection 9(d).

- (ii) Bonneville shall not be obligated to provide such wheeling to PacifiCorp pursuant to section 3(b)(1)(C)(i) if no PNW AC Intertie Operational Transfer Capability is available to Bonneville after Bonneville has scheduled all of Bonneville's Firm Schedules. For purposes of this section, "Bonneville's Firm Schedules" shall mean schedules for assured delivery or other firm transmission contracts pursuant to the Long-Term Intertie Access Policy, as revised or amended, or its successor, and schedules for Bonneville's firm power and energy sales and exchange transactions.
- (iii) Bonneville shall not be obligated to provide such wheeling to PacifiCorp pursuant to section 3(b)(1)(C)(i) until Bonneville has successfully developed software to allow Bonneville to provide such wheeling to PacifiCorp or until October 1, 1994, whichever occurs sooner.
- (iv) No later than ten Working Days prior to the first day of deliveries under a firm transaction, PacifiCorp shall identify such firm transaction to



Bonneville. PacifiCorp shall identify such firm transaction to Bonneville by providing to Bonneville a copy of PacifiCorp's contract for such firm transaction (after information considered proprietary by PacifiCorp has been redacted by PacifiCorp). Bonneville shall review such contract to verify that the transaction is firm. If PacifiCorp and its contractor represent or state in writing that the transaction set forth in their contract is firm, Bonneville shall accept that written representation or statement as dispositive of the question of whether such transaction is firm. Implementation of such procedures in this section 3(b)(1)(C)(iv) may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written.

- (D) PacifiCorp retains any and all rights of access which it would otherwise have to Bonneville's PNW-PSW Intertie through the Long-Term Intertie Access Policy, as revised or amended, or its successor.

**(2) Third Party Wheeling**

- (A) PacifiCorp may use its Scheduling Share to transmit any and all power and energy, whether or not such power or energy is owned by PacifiCorp. PacifiCorp shall have no obligation under this Agreement to make available to Bonneville any portion of PacifiCorp's Scheduling Share which is unused in any hour, and Bonneville shall not schedule over PacifiCorp's Scheduling Share without PacifiCorp's prior consent.
- (B) PacifiCorp hereby waives any and all rights of access to Bonneville's PNW-PSW Intertie through the Long-Term

Intertie Access Policy, as revised or amended, or its successor; provided, however, that Bonneville may, at its option, provide PacifiCorp with access to Bonneville's PNW-PSW Intertie pursuant to any provision of the Long-Term Intertie Access Policy, as revised or amended, or its successor.

(C) PacifiCorp shall provide Bonneville with the information set forth in sections 3(b)(2)(C)(i) through 3(b)(2)(C)(iii) when PacifiCorp uses its Scheduling Share to export from the Pacific Northwest energy or power received from third parties. Such exports of energy or power on a real-time basis or for durations of less than four months are excluded from this obligation. For exports of four months or longer duration made on behalf of third parties pursuant to paragraph 3(b)(2), such information shall include:

- (i) the name and business address of the third party;
- (ii) the amount of power or energy and the duration of the transaction; and
- (iii) the name of the recipient or purchaser of such power.

Any additional information needed by Bonneville will be obtained from such third party.

#### 4. SCHEDULING

- (a) PacifiCorp (and only PacifiCorp) shall be entitled to schedule on the PNW AC Intertie, in any hour, a MW amount up to PacifiCorp's Scheduling Share for such hour. The MW amount of PacifiCorp's Scheduling Share deemed to be scheduled on the PNW AC Intertie

pursuant to this Agreement, in any hour, shall be determined as the net of PacifiCorp's north-to-south schedules and south-to-north schedules (net schedules) for such hour.

- (b) PacifiCorp shall submit all schedules of its Scheduling Share on its own behalf in accordance with the procedures set forth in paragraphs 4(b)(1) and 4(b)(2). Such procedures may be varied by the mutual agreement of the Parties' Schedulers. Such mutual agreement may, but need not, be written. All hours referenced in paragraphs 4(b)(1) and 4(b)(2) are Pacific Time.

(1) **Preschedules**

- (A) Bonneville shall make available to PacifiCorp on each Working Day as soon as practicable after 0800 hours information regarding the PNW AC Intertie Operational Transfer Capability with respect to Preschedules. In the event an emergency or uncontrollable force causes a change in the PNW AC Intertie Operational Transfer Capability, Bonneville shall notify PacifiCorp of such change as soon as practicable.
- (B) If Long-Term Intertie Access Policy Condition 1 Formula Allocation Procedures or their successor (Condition 1) are expected by Bonneville to become effective, Bonneville shall so notify PacifiCorp no later than 0930 hours on the Working Day prior to the day on which Condition 1 is expected to become effective. Bonneville shall notify PacifiCorp no later than 0930 hours on the Working Day prior to the day on which Condition 1 ceases to be in effect.
- (C) PacifiCorp shall submit its Preschedule to the Joint Intertie Scheduling Office no later than 1000 hours on each Working Day if Condition 1 is in effect. If Condition 1 is not in effect, PacifiCorp shall submit its

Preschedule to the JISO no later than 1430 hours on each Working Day.

**(2) Real-time Scheduling**

- (A) Real-time Schedules shall be arranged through Bonneville's real-time scheduling office. Bonneville's real-time Scheduler shall make reasonable efforts to receive Real-time Schedules; provided, however, that Bonneville's real-time Scheduler may, but is not required to, accept Real-time Schedules between 1500 and 2200 hours on the Working Day preceding the day for which such Real-time Schedule is submitted.
- (B) Real-time Schedules shall be arranged for a full hour. Arrangements shall be completed no later than 30 minutes prior to that hour.
- (C) PacifiCorp shall use best efforts to keep schedule changes to a minimum; provided, however, that for purposes of this subparagraph 4(b)(2)(C), "best efforts" shall not be deemed to refer to efforts made regardless of their economic effect.
- (D) The requirements set forth in subparagraphs 4(b)(2)(B) and 4(b)(2)(C) do not preclude schedule changes at other times as may be deemed necessary by any control area operators or other entities involved in effectuating such schedule changes. Such control area operators and other entities shall be notified by Bonneville of such schedule changes as soon as practicable in accordance with Prudent Utility Practice for purposes of coordinating ramps and proper accounting. Such schedule changes shall be deemed to occur at mid-ramp. The mid-ramp time and the integrated value for the

hour shall be subject to the mutual agreement by such control area operators and other entities.

(E) Subject to compliance with subparagraphs 4(b)(2)(A) through 4(b)(2)(D) and with other applicable PNW AC Intertie scheduling practices then in effect, Bonneville shall make PacifiCorp's schedule change.

(c) Bonneville shall make deliveries of power or energy to the California-Oregon border or the John Day Substation, as appropriate, pursuant to schedules submitted in accordance with this section 4; provided, however, that Bonneville shall not be required to make such deliveries in an hour to the extent that PacifiCorp's schedule exceeds PacifiCorp's Scheduling Share for such hour, except as may be expressly provided pursuant to subparagraph 3(b)(1)(C).

## 5. UPGRADES

- (a) Bonneville shall consult with the Committee one time each year regarding any plans for Upgrades.
- (b) Prior to the completion of an Upgrade, Bonneville shall provide to PacifiCorp information in writing regarding estimated costs and the MW amount of such Upgrade, to the extent that such information is available to Bonneville.
- (c) As soon as practicable following the completion of an Upgrade, Bonneville shall notify PacifiCorp in writing of the following: (1) the MW amount of such Upgrade; (2) the capital and related costs (less any amount of such costs collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, to Bonneville for completing or implementing such Upgrade; and (3) calculations of (A) PacifiCorp's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade and (B) PacifiCorp's Capacity Ownership Percentage multiplied by the capital and related costs, if any, to Bonneville for completing or implementing such

Upgrade. PacifiCorp may elect to acquire a share of such Upgrade in an amount up to PacifiCorp's Capacity Ownership Percentage multiplied by the MW amount of such Upgrade. Within 100 days from receipt of such written notice from Bonneville, PacifiCorp shall notify Bonneville in writing of PacifiCorp's decision regarding such acquisition. If PacifiCorp elects to acquire, pursuant to this subsection 5(c), a portion of such Upgrade, PacifiCorp's notice to Bonneville shall include the percentage of such Upgrade that PacifiCorp elects to acquire (Acquisition Percentage). If PacifiCorp fails to notify Bonneville within such 100-day period, PacifiCorp shall be deemed to have elected not to acquire any of such Upgrade.

- (d) If PacifiCorp elects to acquire a portion of an Upgrade pursuant to subsection 5(c), the cost to PacifiCorp shall be PacifiCorp's Acquisition Percentage multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such cost collected by Bonneville through rates or charges other than pursuant to the CO-94 rate in Exhibit A), if any, incurred by Bonneville for completing or implementing such Upgrade. PacifiCorp shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (e) If PacifiCorp's Acquisition Percentage with respect to an Upgrade equals its Capacity Ownership Percentage and the Acquisition Percentage of any other Capacity Owner with respect to such Upgrade is less than its Capacity Ownership Percentage, then the following shall apply:
  - (1) Bonneville shall, in a timely manner, provide written notice simultaneously to PacifiCorp and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage) of the MW amount equal to 100 percent of that portion of an Upgrade offered to, but not acquired by, the Capacity Owners pursuant to subsection 5(c) (Unacquired Share). If PacifiCorp and each of such other Capacity Owners have agreed in writing to an apportionment

as among themselves of the Unacquired Share (Apportionment), PacifiCorp may, within 45 days following receipt of such written notice from Bonneville, by written notice request Bonneville to offer in writing to PacifiCorp such portion of the Unacquired Share as has been apportioned to PacifiCorp pursuant to the Apportionment, and Bonneville shall offer to PacifiCorp such portion of the Unacquired Share.

- (2) If Bonneville does not receive from PacifiCorp and from each Capacity Owner referred to in paragraph 5(e)(1) the requests for offer pursuant to paragraph 5(e)(1) within the 45-day period specified in such paragraph, Bonneville shall, in a timely manner, offer in writing simultaneously to PacifiCorp and to each other Capacity Owner (whose Acquisition Percentage equals its Capacity Ownership Percentage), respectively, a portion of an Upgrade offered to, but not acquired by, the other Capacity Owners pursuant to paragraph 5(e)(1) (Second Unacquired Share) up to the "Additional Share Offered" determined as follows:

$$\text{Additional Share Offered} = (A \div B) \times C$$

where: A = PacifiCorp's Capacity Ownership Percentage.

B = Percentage equal to the sum of Capacity Ownership Percentages of Capacity Owners that acquired respectively an Acquisition Percentage equal to their Capacity Ownership Percentage.

C = Second Unacquired Share.

- (3) Within 30 days following PacifiCorp's receipt of Bonneville's written offer pursuant to paragraph 5(e)(2), PacifiCorp shall notify Bonneville in writing of PacifiCorp's decision regarding acquisition of the Additional Share Offered. If PacifiCorp fails to notify Bonneville within such 30-day period, PacifiCorp shall be deemed to have elected not to acquire any of the Additional Share Offered. If PacifiCorp elects pursuant to this paragraph

5(e)(3) to acquire any or all of the Additional Share Offered, then:

- (A) PacifiCorp shall include in its notice to Bonneville pursuant to this paragraph 5(e)(3) such share (Additional Share Acquired) of the Additional Share Offered as PacifiCorp elects to acquire pursuant to this paragraph 5(e)(3), and
- (B) the cost to PacifiCorp with respect to such acquisition shall be equal to the proportion of the Additional Share Acquired to such Upgrade multiplied by the capital and related costs for such Upgrade pursuant to the CO-94 rate and subsection 9(c) (less any amount of such costs collected by Bonneville through charges other than payments by PacifiCorp pursuant to subsection 5(d) or subparagraph 5(e)(3)(B)), if any, to Bonneville for completing or implementing such Upgrade. PacifiCorp shall pay such costs pursuant to such payment terms as may be mutually agreed to in writing by the Parties.
- (f) All capacity offered but not acquired pursuant to subsections 5(c) and (e) shall for purposes of this Agreement remain with Bonneville.
- (g) After PacifiCorp has either accepted or declined all offers of capacity by Bonneville pursuant to subsections 5(c) and (e), PacifiCorp's Capacity Ownership Share, Capacity Ownership Percentage, and Scheduling Percentage in Exhibit C shall be revised to reflect changes resulting from PacifiCorp's elections pursuant to subsections 5(c) and (e). Revision of Exhibit C shall be pursuant to subsection 19(d). Exhibit G shall be revised accordingly pursuant to subsection 19(i).

## 6. SALE OR ASSIGNMENT

- (a) This Agreement or any interest herein shall not be transferred, sold, alienated, or assigned by PacifiCorp to any person without



Bonneville's prior and express written consent. Such consent shall not be unreasonably withheld. In determining whether to grant its consent under this subsection 6(a), Bonneville shall take into consideration information including, but not limited to, whether the person or entity to whom this Agreement or any interest therein is proposed to be transferred, sold, alienated, or assigned is a person or entity entitled to request and receive transmission services pursuant to section 211 of the Federal Power Act, whether such person or entity can either provide its own scheduling services or has contracted with another entity to provide such scheduling services, whether such person or entity has the financial capability to meet the payment obligations under this Agreement, and whether the person or entity is either electrically interconnected to Bonneville's transmission system or has contractual arrangements for wheeling with others who are electrically interconnected to Bonneville's transmission system. This Agreement shall inure to the benefit of and be binding upon the Parties, their respective legal representatives, permitted assigns, and successors in interest. Any transfer, sale, alienation, or assignment made by PacifiCorp in violation of this section 6 shall be void ab initio and without any force or effect whatsoever.

- (b) Bonneville hereby consents to the transfer, sale, alienation, or assignment by PacifiCorp to any other Capacity Owner of all or part of its Capacity Ownership Share and all of PacifiCorp's rights and obligations pursuant to this Agreement with respect thereto. Bonneville hereby further consents to the transfer, sale, alienation, or assignment by PacifiCorp of the entire Agreement and of all of PacifiCorp's rights and obligations under this Agreement to a Scheduling Utility.
- (c) Bonneville hereby consents to the assignment by PacifiCorp of this Agreement or of any of PacifiCorp's rights under this Agreement as security for any indebtedness, whether present or future, of PacifiCorp pursuant to any mortgage, trust, security agreement or similar instrument of indebtedness (each such instrument, a Debt Instrument) made by and between PacifiCorp and any mortgagee,

trustee, secured party or holder of such instrument of indebtedness, respectively; provided, however, that if PacifiCorp has defaulted in the performance of its obligations under any Debt Instrument, such that the mortgagee, trustee, secured party or holder of such Debt Instrument, as the case may be, would be entitled at that time to accelerate the amount of indebtedness under such Debt Instrument, PacifiCorp shall give Bonneville prompt written notice in reasonable detail of such default and shall, at Bonneville's election, enter into good faith discussions with Bonneville regarding the cure of such default.

- (d) If PacifiCorp transfers, sells, alienates, or assigns, with Bonneville's consent, all or any portion of this Agreement and any rights and obligations pursuant to this Agreement to any person or party, PacifiCorp shall give Bonneville written notice of such transfer, sale, alienation, or assignment within 10 days after the execution and delivery of the agreement effectuating such transaction by all parties to such transaction.

## **7. OPERATION, MAINTENANCE, AND MANAGEMENT**

- (a) Pursuant to the terms and conditions of the Northwest Intertie Agreements, Bonneville is the operator of the PNW AC Intertie. As such, Bonneville is responsible for the dispatch of the PNW AC Intertie in accordance with Prudent Utility Practice. Bonneville's duties as operator of the PNW AC Intertie shall include, but are not limited to, consistent with Prudent Utility Practice and Northwest Intertie Agreements: (1) determining the PNW AC Intertie Operational Transfer Capability; (2) implementing and assisting in rectifying emergency outages on the PNW AC Intertie due to system emergencies or uncontrollable forces; (3) implementing maintenance outages; and (4) giving and receiving switching orders on the PNW AC Intertie. In making any determination or in taking any other action referred to in the immediately preceding sentence, Bonneville shall give fair consideration to PacifiCorp's interests to the extent such interests have been expressed to Bonneville in writing. Bonneville

shall operate, maintain, and manage Bonneville's PNW AC Intertie, and study, plan, and implement Upgrades, consistent with Prudent Utility Practice.

- (b) Bonneville shall determine and revise as necessary the PNW AC Intertie Rated Transfer Capability consistent with Prudent Utility Practice and engineering studies based on then existing reliability criteria developed by the North American Electric Reliability Council, the Western Systems Coordinating Council, the Northwest Power Pool, and Bonneville. In the event the PNW AC Intertie Rated Transfer Capability is changed, Bonneville shall promptly notify PacifiCorp in writing of such change and the new PNW AC Intertie Rated Transfer Capability. If and to the extent that the reliability criteria for determining the PNW AC Intertie Rated Transfer Capability change substantially, Bonneville shall notify PacifiCorp in writing of such change.
- (c) If at any time during the Term, Bonneville's PNW AC Intertie Rated Transfer Capability becomes less than 3450 MW, or if at any time during the Term there is an imminent likelihood that Bonneville's PNW AC Intertie Rated Transfer Capability would become less than 3450 MW, then Bonneville shall reinforce the Federal Columbia River Transmission System so as to raise Bonneville's PNW AC Intertie Rated Transfer Capability to 3450 MW or otherwise to prevent Bonneville's PNW AC Intertie Rated Transfer Capability from becoming less than 3450 MW. PacifiCorp's Capacity Ownership Share shall not be decreased on account of any failure by Bonneville to reinforce the Federal Columbia River Transmission System pursuant to this subsection 7(c).
- (d) In the event that Bonneville implements a Reinforcement pursuant to subsection 7(c), Bonneville shall equitably allocate the Reinforcement Cost for such Reinforcement between Bonneville and PacifiCorp based on factors including, but not limited to, load responsibility, contractual obligation and generation integration responsibility. Any equitable allocation or agreed to allocation (pursuant to the immediately

succeeding sentence) of a Reinforcement Cost pursuant to this subsection 7(d) shall be reflected as a Reinforcement Cost in an Operating Plan proposed by Bonneville pursuant to section 13. To the extent that Bonneville and PacifiCorp have agreed in writing to an allocation of a Reinforcement Cost incurred by Bonneville pursuant to an agreement or modification referred to in subsection 8(b), the Reinforcement Cost so allocated shall not be subject to arbitration pursuant to section 14 or section 15. Any Reinforcement Cost not allocated to PacifiCorp pursuant to this subsection 7(d) shall not be payable by PacifiCorp pursuant to this Agreement.

- (e) Bonneville shall provide PacifiCorp notice of maintenance outages in accordance with the accepted standards for notice on the PNW AC Intertie. Such notice shall include an evaluation of the impact on PacifiCorp's Scheduling Share. In scheduling or planning maintenance on PNW AC Intertie, Bonneville shall give fair consideration to PacifiCorp's interests to the extent such interests have been expressed to Bonneville in writing.

## 8. **EXISTING AGREEMENTS**

- (a) Bonneville shall use good faith efforts to maintain in effect the Interconnection Agreement or its successor.
- (b) Bonneville shall use its best efforts to maintain PacifiCorp's rights under this Agreement (i) by making no modification to the Northwest Intertie Agreements, (ii) by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie, and (iii) by making no modification to the agreements referred to in the immediately preceding clause (ii) that would have a substantial negative impact on PacifiCorp's rights pursuant to sections 3, 4, 7, or to subsection 9(b), 9(c), or 11(a) without PacifiCorp's prior written consent. Without limiting, modifying, or otherwise affecting any of its rights pursuant to sections 9, 13, 14, 15, and 16, PacifiCorp hereby consents to Bonneville's modification of the Northwest Intertie Agreements or

Bonneville's entering into other agreements or modification to such Agreements with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification or such agreement is made or entered into by Bonneville for the purpose of performing Bonneville's obligations pursuant to subsection 7(c).

## 9. **PAYMENT PROVISIONS**

As full compensation for their respective payment obligations under this Agreement, PacifiCorp shall make payments to Bonneville in accordance with the provisions of this section 9, and Bonneville shall make payments and refunds to PacifiCorp in accordance with the provisions of this section 9.

### (a) **Lump Sum Payment**

(1) As soon as practicable after the Effective Date, Bonneville shall render a bill to PacifiCorp for the Initial Lump Sum Payment (less the negotiation deposit, if any, with applicable interest as described in section C of Exhibit D) and such bill shall include as an attachment and as part of such bill a completed section C of Exhibit D, setting forth the calculation of such Initial Lump Sum Payment due Bonneville in accordance with section IV.A of the CO-94 rate set forth in Exhibit A. PacifiCorp shall make such payment pursuant to the CO-94 rate and the applicable GTRSPs set forth in Exhibit A. Each of Bonneville and PacifiCorp agrees that section C of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

### (2) **Calculation and Billing of the Adjusted Capacity Ownership Price**

(A) Approximately December 1995, or as soon as practicable thereafter, Bonneville shall, in accordance with section IV.B of the CO-94 rate set forth in Exhibit A, calculate the Adjusted Capacity Ownership Price to reflect actual

construction costs of the facilities listed in section A of Exhibit D and the actual AFUDC with respect to such facilities. Such calculation shall be made in accordance with column 2, section B of Exhibit D.

- (B) Promptly after Bonneville has calculated the Adjusted Capacity Ownership Price pursuant to subparagraph 9(a)(2)(A), Bonneville shall render a bill or refund voucher to PacifiCorp, and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2), section B of Exhibit D (with a completed column 2), and a completed section D of Exhibit D reflecting the Adjusted Lump Sum Payment. If the Adjusted Lump Sum Payment is greater than the Initial Lump Sum Payment, PacifiCorp shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in such bill, which amount shall be equal to the amount set forth on line 7, section D of Exhibit D (such amount including interest as set forth on line 6, section D of Exhibit D). If the Adjusted Lump Sum Payment is less than the Initial Lump Sum Payment, Bonneville shall pay to PacifiCorp, within 30 days after the date of such refund voucher, the amount set forth in such refund voucher, which amount shall be equal to the amount set forth on line 7, section D, of Exhibit D (such amount including interest as set forth on line 6, section D, of Exhibit D). Each of Bonneville and PacifiCorp agrees that sections A, B, and D of Exhibit D are consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

**(3) Calculation and Billing of the Revised Adjusted Capacity Ownership Price**

- (A) After payment is made by PacifiCorp pursuant to subparagraph 9(a)(2)(B), or a refund is made by Bonneville to PacifiCorp pursuant to subparagraph 9(a)(2)(B), Bonneville may, in accordance with the CO-94 rate set forth in Exhibit A, make one or more adjustments to the Adjusted Capacity Ownership Price; provided, that any such adjustment shall be made by Bonneville within 30 days after the date on which
- (i) Bonneville receives, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp or any other entity performing work for Bonneville on the Third AC Intertie Project, payment from Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, or
  - (ii) Bonneville pays, pursuant to any audit with respect to the Third AC Intertie Project by Bonneville, Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project, any amount to Transmission Agency of Northern California, PacifiCorp, or any other entity performing work for Bonneville on the Third AC Intertie Project; and
- provided, further, that no adjustment of the Adjusted Capacity Ownership Price or of any Revised Adjusted Capacity Ownership Price shall be made by Bonneville after December 31, 2005.
- (B) Promptly after Bonneville has calculated a Revised Adjusted Capacity Ownership Price, Bonneville shall render to PacifiCorp a bill or refund voucher with respect to such Revised Adjusted Capacity Ownership

Price and such bill or refund voucher shall include as an attachment and as part of such bill or refund voucher section A of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), section B of Exhibit D (with a completed column 2 and a completed column with respect to each Revised Adjusted Capacity Ownership Price), and a completed section E of Exhibit D reflecting the current Revised Adjusted Capacity Ownership Price and the current Revised Adjusted Lump Sum Payment. If the current Revised Adjusted Lump Sum Payment with respect to such Revised Adjusted Capacity Ownership Price is greater than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, then PacifiCorp shall pay to Bonneville, within 45 days from the date of such bill or within such other time period to which the Parties may mutually agree, the amount set forth in the bill referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E, of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E, of Exhibit D). If the current Revised Adjusted Lump Sum Payment is less than the Adjusted Lump Sum Payment or the immediately preceding Revised Adjusted Lump Sum Payment, as the case may be, Bonneville shall pay to PacifiCorp, within 30 days after the date of such refund voucher, the amount set forth in the refund voucher referred to in this subparagraph 9(a)(3)(B), which amount shall be equal to the amount set forth on line 7, section E of Exhibit D with respect to the current Revised Adjusted Lump Sum Payment (such amount including interest as set forth on line 6, section E of Exhibit D). Each of Bonneville and PacifiCorp



agrees that section E of Exhibit D is consistent with the CO-94 rate set forth in Exhibit A on the Effective Date.

- (4) For purposes of implementing the CO-94 rate, the following shall apply:
- (A) the calculations pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the adjustment "to reflect the difference between the actual and the estimated Capacity Ownership Price" required under section IV.B of the CO-94 rate;
  - (B) the calculations of interest pursuant to footnote 2 of section D of Exhibit D and footnote 2 of section E of Exhibit D shall be deemed to be the computation of "interest using the weighted average interest rate on Bonneville's outstanding bonds" required pursuant to section IV.B of the CO-94 rate;
  - (C) the calculations of the Adjusted Capacity Ownership Price and of the Revised Adjusted Capacity Ownership Price pursuant to paragraphs 9(a)(2) and 9(a)(3) shall be deemed to be the determination of the "actual Capacity Ownership Price" required pursuant to section IV.B of the CO-94 rate;
  - (D) as used in the CO-94 rate, the terms "Bonneville's PNW AC Intertie," "PNW AC Intertie," "Third AC Intertie," "Third AC Intertie Project," and "Third AC Intertie System Reinforcement" shall be deemed to have the respective meanings of such terms set forth in section 1;
  - (E) as used in the CO-94 rate, the term "Capacity Ownership Share" shall be deemed to mean "Capacity Ownership Percentage" as defined in section 1;

- (F) the indirect costs and overhead costs described in footnote 5 of section B of Exhibit D shall be deemed to be the indirect costs and overhead costs referred to in section III.A of the CO-94 rate; and
- (G) the last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:

The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.

- (5) For purposes of application of the CO-94 rate set forth in Exhibit A, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (A) section I;
  - (B) section III.A;
  - (C) the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;
  - (D) subsection 4 of section IV.A;
  - (E) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A; and

- (F) for purposes of subsection 16(e) of this Agreement and as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.

(b) **Annual Charges**

(1) **Payments Pursuant to AC-93 Rate**

- (A) From and after the first Working Day after Bonneville receives payment from PacifiCorp pursuant to paragraph 9(a)(1), Bonneville shall bill PacifiCorp on the monthly power bill in accordance with the AC-93 rate set forth in Exhibit A. PacifiCorp shall pay such bill in accordance with the applicable GTRSPs set forth in Exhibit A.
- (B) For purposes of application of the AC-93 rate, no provision of the General Transmission Rate Schedule Provisions set forth in Exhibit A, other than the following provisions of the General Transmission Rate Schedule Provisions set forth in Exhibit A (or their successors in substance), shall have any application or effect with respect to this Agreement:
  - (i) section I;
  - (ii) section III.A;
  - (iii) *the last three sentences of section IV.A, without regard to subsections 1, 2, 3, 4, 5, 6 and 7 of such section IV.A;*
  - (iv) the first sentence of subsection 3 of section IV.A;

- (v) subsection 4 of section IV.A;
  - (vi) the first paragraph and the first sentence of the second paragraph of subsection 5 of section IV.A;
  - (vii) the first paragraph of subsection 6 of section IV.A; and
  - (viii) as deemed necessary by Bonneville to correct mathematical and computational errors on bills, subsection 7 of section IV.A.
- (C) The last paragraph of section I.B of the General Transmission Rate Schedule Provisions set forth in Exhibit A shall be deemed to read in its entirety as follows:
- The meaning of terms used in the transmission rate schedules shall be as defined in the Agreement or in provisions which are attached to the Agreement or, if not defined therein, such terms shall be as defined in any of the above Acts.
- (D) Bonneville hereby agrees that the provisions of the AC-93 rate shall have no application or effect with respect to the following:
- (i) any replacement of the series capacitor banks containing polychlorinated biphenyl at the Sand Springs, Sycan and Fort Rock Substations; and
  - (ii) any replacement commenced prior to the Effective Date or not completed prior to September 30, 1995.

- (E) Upon and after the effective date of the annual costs rate set forth in Exhibit B, Bonneville shall cease billing PacifiCorp pursuant to the AC-93 rate.

(2) **Payments Pursuant to Annual Costs Rate**

From and after the date the annual costs rate set forth in Exhibit B becomes effective, the following shall apply:

(A) **Operations Costs, Maintenance Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs**

- (i) During each fiscal year during the Term, Bonneville shall bill PacifiCorp on the monthly power bill, and PacifiCorp shall pay, pursuant to Exhibit B, forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for such fiscal year. Such costs shall be, respectively, the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the fiscal year in which such month occurs.
- (ii) Within eight months after the end of each fiscal year during the Term (such fiscal year being hereinafter referred to as a "Fiscal Year"), Bonneville shall determine and calculate, pursuant to Exhibit I, Schedules A, B, D, E, F, G, and H, actual Operations Costs, actual

Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year most recently ended.

- (iii) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year is greater than the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year, Bonneville shall refund to PacifiCorp the difference between such forecast costs and such actual costs as a lump sum payment, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. Bonneville shall, promptly following the date on which the calculation of such difference is made, provide PacifiCorp written notice of such refund. Within the 30-day period referred to in the first sentence of this section 9(b)(2)(A)(iii), Bonneville shall provide to PacifiCorp an Operating Plan amended in accordance with subsection 13(k) containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast Operations Costs, actual and

forecast Maintenance Costs, General Plant Costs, actual and forecast Other Costs, actual and forecast Contracts and Rates Costs, actual and forecast Power Scheduling Costs, and actual and forecast End of Term Costs for the Fiscal Year.

- (iv) If, based on the calculation performed pursuant to subparagraph 9(b)(2)(A)(ii), the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is equal to or less than 105 percent, but greater than 100 percent, of the sum of the forecast Operations costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs in the Operating Plan for the Fiscal Year, Bonneville shall bill to PacifiCorp on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. PacifiCorp shall pay such bill in accordance with the Billing Provisions. Within the 30-day period referred to in the immediately preceding sentence, Bonneville shall provide to PacifiCorp an amended Operating Plan containing revised schedules in the format set forth in Exhibit I, Schedules A, B, D, E, F, G, and H, respectively, with a completed last column reflecting the difference between actual and forecast

Operations Costs, actual and forecast  
Maintenance Costs, General Plant Costs, actual  
and forecast Other Costs, actual and forecast  
Contracts and Rates Costs, actual and forecast  
Power Scheduling Costs, and actual and forecast  
End of Term Costs for the Fiscal Year.

- (v) If, based on the calculation performed pursuant to section 9(b)(2)(A)(ii), the sum of the actual Operations Cost, actual Maintenance Cost, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs for the Fiscal Year is greater than 105 percent of the sum of the forecast Operations Cost, forecast Maintenance Cost, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs for the Fiscal Year, Bonneville shall bill to PacifiCorp on the monthly power bill the difference between such actual costs and such forecast costs as a lump sum charge, with interest pursuant to section 9(b)(2)(A)(vi), within 30 days after the date on which the calculation referred to in section 9(b)(2)(A)(ii) is made. PacifiCorp shall pay such bill in accordance with the Billing Provisions; provided, however, that Bonneville shall not bill PacifiCorp pursuant to this section 9(b)(2)(A)(v) any amount which exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year unless and



until such amount which exceeds 100 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in the Operating Plan for the Fiscal Year has been included in an Operating Plan amended pursuant to subsection 13(k).

- (vi) Simple interest shall be accrued on payments or refunds due pursuant to this paragraph 9(b)(2) with respect to any fiscal year during the Term using the weighted average interest rate on Bonneville's outstanding bonds or other debt instruments then used by Bonneville and such interest shall accrue from (and including) the date of the last day of such fiscal year to (but excluding) the date of refund to PacifiCorp or to (but excluding) the due date of a payment due Bonneville.

**(B) Replacement Cost and Reinforcement Cost**

Bonneville shall bill PacifiCorp on the monthly power bill Replacement Costs for any Replacement and Reinforcement Costs for any Reinforcement. Bonneville shall render such bill within 15 months following the date on which the project work order for such Replacement or such Reinforcement, as the case may be, is closed. PacifiCorp shall pay such bill pursuant to Exhibit B and sections 9(b)(2)(B)(i), 9(b)(2)(B)(ii), 9(b)(2)(B)(iii) and 9(b)(2)(B)(iv).

- (i) If the forecast Replacement Cost for a Replacement is greater than the actual

Replacement Cost for such Replacement or if the forecast Reinforcement Cost for a Reinforcement is greater than the actual Reinforcement Cost for such Reinforcement, Bonneville shall bill PacifiCorp the actual Replacement Cost for such Replacement or the actual Reinforcement Cost for such Reinforcement, as the case may be. Bonneville shall provide to PacifiCorp an Operating Plan amended in accordance with subsection 13(k) containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement, as the case may be.

- (ii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual Reinforcement Cost is equal to or less than 105 percent, but greater than 100 percent, of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill PacifiCorp such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and PacifiCorp shall pay such bill pursuant to subparagraph 9(b)(2)(B). Bonneville shall provide to PacifiCorp an amended Operating Plan containing a revised schedule in the format set forth in Exhibit I, Schedule C, reflecting the difference between the actual and forecast Replacement Cost for such Replacement or the actual and forecast Reinforcement Cost for such Reinforcement.
- (iii) If, for each Replacement or Reinforcement, the actual Replacement Cost or actual

Reinforcement Cost is greater than 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, Bonneville shall bill PacifiCorp such actual Replacement Cost or such actual Reinforcement Cost, as the case may be, on the monthly power bill and PacifiCorp shall pay such bill pursuant to subparagraph 9(b)(2)(B); provided, however, that Bonneville shall not bill PacifiCorp pursuant to this subparagraph 9(b)(2)(B) any amount which exceeds 105 percent of the forecast Replacement Cost or forecast Reinforcement Cost, as the case may be, unless and until such amount which exceeds 100 percent of such forecast Replacement or such forecast Reinforcement Cost, as the case may be, has been included in an amended Operating Plan pursuant to subsection 13(k).

- (iv) Charges pursuant to sections 9(b)(2)(B)(i), (ii) and (iii) for Replacement Costs and Reinforcement Costs shall accrue simple interest pursuant to section III.D of Exhibit I.

(c) **Upgrade Charges**

For purposes of implementing the CO-94 rate, the following shall apply:

- (1) as used in the CO-94 rate, the term "upgrade" shall be deemed to mean "Upgrade" as defined in section 1, the term "rated transfer capability" shall be deemed to mean "PNW AC Intertie Rated Transfer Capability" as defined in section 1 and the term "AFUDC" shall be deemed to have the meaning set forth for such term in section 1;

- (2) the "Capacity Ownership Share of the capital and related cost of the upgrade," referred to in section III.B of the CO-94 rate shall be deemed to be the costs pursuant to subsection 5(d) and subparagraph 5(e)(3)(B), as applicable; and
- (3) "construction costs (including direct, indirect and overhead costs) and AFUDC" referred to in section III.B of the CO-94 rate and "related costs" referred to in section III.B of the CO-94 rate together shall be deemed to be Upgrade costs and shall be determined in the same manner in which Replacement Costs are determined pursuant to section III of Exhibit I; provided, however, that expenses that are properly allocable to an Upgrade (i.e., "related costs" referred to in section III.B of the CO-94 rate) in accordance with generally accepted accounting principles (as defined in Exhibit I) may be included by Bonneville in Upgrade costs for such Upgrade.

**(d) Payments of Charges Pursuant to Section 3(b)(1)(C)(i)**

Bonneville shall bill PacifiCorp for wheeling provided pursuant to section 3(b)(1)(C)(i) on PacifiCorp's monthly power bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A and PacifiCorp shall pay such bill in accordance with the IS-93 rate, section II.A, or its successor, set forth in Exhibit A; provided, however, that under any successor to the IS-93 rate, PacifiCorp shall not be obligated to pay any rate or charge greater than the rate or charge payable by any other party to which Bonneville provides nonfirm wheeling services on Bonneville's PNW AC Intertie for such party's nonfirm transaction of a duration similar to PacifiCorp's wheeling transaction pursuant to section 3(b)(1)(C)(i).

**(e) Suspension for Failure to Perform**

- (1) If at any time during the term of this Agreement Bonneville does not receive payment due and owing to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or

9(d), Bonneville shall be entitled to suspend performance of its obligations to PacifiCorp pursuant to section 4 without incurring any liability to PacifiCorp therefor; provided, that Bonneville shall not be entitled to suspend performance pursuant to this paragraph 9(e)(1) earlier than five Working Days following receipt from Bonneville by PacifiCorp of written notice of such suspension. Such suspension shall continue in effect until the next Working Day following the Working Day on which PacifiCorp makes payment in full to Bonneville of the balance owed to Bonneville pursuant to paragraph 9(a)(2) or 9(a)(3) or to subsection 9(b) or 9(d). During the period of such suspension, PacifiCorp shall not be entitled to participate through the Committee in any review of an Operating Plan commenced by the Committee pursuant to section 13 during such period of suspension, or to participate in any arbitration commenced by the Committee pursuant to sections 14 and 15 during such period of suspension, or to participate in any audit commenced by the Committee pursuant to section 16 during such period of suspension.

- (2) If during any period in any month Bonneville fails to make deliveries in accordance with subsection 4(c), PacifiCorp shall be entitled, without incurring any liability to Bonneville therefor, to delay any payment due and owing to Bonneville by PacifiCorp pursuant to subsection 9(b) or 9(d) for a period, equal to the period during which Bonneville failed to make such deliveries, commencing on the date the monthly power bill for such month would otherwise be payable by PacifiCorp pursuant to this Agreement; provided, however that PacifiCorp's entitlement pursuant to this paragraph 9(e)(2) shall apply only with respect to the amount of such monthly power bill to be paid directly to Bonneville or its agent.

**(f) Payments or Refunds by Bonneville**

- (1) Bonneville shall make any payment to PacifiCorp pursuant to subparagraph 3(b)(1)(B) within 30 days following the end of the month in which such payment becomes due to PacifiCorp pursuant to subparagraph 3(b)(1)(B).
- (2) Bonneville shall pay to PacifiCorp, in a lump sum, any refund due to PacifiCorp pursuant to subsection 16(e) or paragraph 16(f)(2) within 30 days following the date on which such refund becomes due to PacifiCorp pursuant to subsection 16(e) or paragraph 16(f)(2), respectively.
- (3) Bonneville shall pay any refund, credit, or payment due to PacifiCorp under section 18 pursuant to the terms and conditions set forth in section 18.
- (4) Each payment, credit or refund due to PacifiCorp by Bonneville pursuant to this Agreement shall be made by Bonneville, at Bonneville's option, (A) by check payable to the order of PacifiCorp, (B) by electronic funds transfer of immediately available funds into such account as may be designated in writing by PacifiCorp from time to time for such purpose or (C) by crediting the amount of such payment, credit or refund on PacifiCorp's power bill.

**10. TRANSMISSION LOSSES**

- (a) To compensate Bonneville for transmission losses incurred by Bonneville in making deliveries scheduled by PacifiCorp pursuant to this Agreement, PacifiCorp shall make available, or arrange to have made available, to Bonneville, at any point mutually acceptable to the Parties at which the respective electric systems of PacifiCorp and Bonneville are interconnected, on the corresponding hour 168 hours later or on another hour to be agreed upon, the amounts of electric power equal to PacifiCorp's net PNW AC Intertie schedule multiplied

by the appropriate loss factor specified in Exhibit E. PacifiCorp's net PNW AC Intertie schedule shall be, for any given hour, the absolute value of the sum of PacifiCorp's north-to-south schedules (positive) and south-to-north schedules (negative) for such hour.

- (b) Upon the conclusion of any review by Bonneville of the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan provided to the Committee pursuant to section 13. The Committee may make recommendations regarding such results and any revisions to the loss factor in Exhibit E, Part A. Only recommendations regarding assumptions (including, without limitation, data inputs and source of data) made by Bonneville in its review or revision of the loss factor in Exhibit E, Part A, and recommendations regarding the results of such review or revision shall be subject to arbitration pursuant to section 14.
- (c) PacifiCorp's Scheduling Share shall not be reduced by any amount of losses returned to Bonneville pursuant to subsection 10(a).

## 11. **REMEDIAL ACTIONS**

### (a) **Bonneville's Responsibilities**

- (1) Within five days after the Effective Date, Bonneville shall notify PacifiCorp in writing of the plan for remedial actions required to maintain the PNW AC Intertie Rated Transfer Capability, which plan shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice. If and to the extent that such plan is amended, modified, or replaced, Bonneville shall, promptly following such amendment, modification, or replacement, provide written notice to PacifiCorp of such amendment, modification, or replacement, as the case may be. Bonneville shall be responsible for providing a capability to arm and having

available appropriate remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, required to maintain the portion of Bonneville's PNW AC Intertie Rated Transfer Capability not purchased by Capacity Owners. Such remedial actions shall be consistent with Western System Coordinating Council standards and Prudent Utility Practice.

- (2) Bonneville shall be responsible for generating appropriate control signals for transmission to PacifiCorp for purposes of effectuating remedial actions pursuant to this section.

**(b) PacifiCorp's Responsibilities**

- (1) PacifiCorp shall be responsible for providing a capability to arm and having available appropriate remedial actions, which may include generator dropping, load tripping, or other remedial actions required to maintain PacifiCorp's Capacity Ownership Share. Such remedial actions shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1) and Prudent Utility Practice. Bonneville may perform engineering analyses to confirm PacifiCorp's providing capability to arm and having available appropriate remedial actions pursuant to this paragraph 11(b)(1).
- (2) In any given hour, PacifiCorp shall be responsible for providing sufficient remedial actions, which may include generator dropping, load tripping, or other acceptable remedial actions, to maintain PacifiCorp's schedule on the PNW AC Intertie for such hour. To the extent that load tripping or generator dropping is required as a remedial action by PacifiCorp pursuant to this paragraph 11(b)(2) in any given hour, the required amount of such load tripping or such generator dropping shall be determined by dividing the amount of power scheduled by PacifiCorp on PacifiCorp's Scheduling Share in



such hour by the total amount of power scheduled on the PNW AC Intertie in such hour and multiplying the result by the total amount of generation or load (in MW) to be armed for the PNW AC Intertie in such hour.

- (3) PacifiCorp shall provide, design, operate, and maintain the necessary equipment to accept control signals from Bonneville and to transmit such signals to PacifiCorp's generator dropping, load tripping, or other remedial action sites, and to arm and initiate the appropriate control action(s). Such design, operation, and maintenance shall be consistent with Western System Coordinating Council standards, the plan referred to in paragraph 11(a)(1), and Prudent Utility Practice.
- (4) PacifiCorp and Bonneville may mutually agree that Bonneville will, pursuant to terms and conditions mutually acceptable to the Parties, provide the remedial actions required of PacifiCorp pursuant to subsection 11(b).

## 12. **CAPACITY OWNERS' COMMITTEE**

### (a) **Composition of Committee**

PacifiCorp may appoint one representative (and an alternate who may act in the absence of such representative) as a member of the Capacity Owners' Committee (Committee). If during any period PacifiCorp fails to appoint a representative to the Committee, PacifiCorp waives any and all rights during such period that would otherwise have accrued to it, individually or as a member of the Committee, pursuant to sections 12, 13, 14, 15, and 16 of this Agreement. PacifiCorp hereby appoints as its representative pursuant to this subsection the following representative and alternate to the Committee:

Representative: Senior Vice President, Wholesale Transactions  
and Transmission

Alternate: Manager, Power System Services

**(b) Convening Meetings**

- (1) Any Capacity Owner that has appointed a representative to the Committee may convene a meeting of the Committee pursuant to the procedures set forth in subsection 12(e). The Capacity Owner convening a Committee meeting shall be responsible for preparing any necessary notices, identifying the subject matter and issues to be discussed, and transmitting notices and relevant documents to the other Committee members and, if appropriate, to Bonneville.
- (2) At the written request of any Capacity Owner that has appointed a representative to the Committee, Bonneville shall attend Committee meetings.
- (3) The Committee may conduct business only at a properly convened meeting at which a quorum, as defined in subsection 12(c), is present. The Committee shall make or convey any request, designation, recommendation, notice, appointment, submission, audit report or exception, or statement to which Bonneville is required to respond or which creates or triggers an obligation of Bonneville, pursuant to this Agreement, only upon a decision of the Committee made at a properly convened meeting at which a quorum is present.
- (4) Each fiscal year, Bonneville shall convene an annual meeting of the Committee. The purpose of such annual meeting shall be to discuss the Operating Plan delivered, pursuant to subsection 13(b), to each Capacity Owner that has appointed a representative to the Committee. Bonneville shall convene such annual meeting no earlier than 15 days, but no later than 30 days, following the date of such delivery of the Operating Plan.

- (5) In addition to the meeting referred to in paragraph 12(b)(4), Bonneville may, at its discretion, convene meetings of the Committee, pursuant to the procedures set forth in subsection 12(e), to present to the Committee any information Bonneville deems relevant.

(c) **Meeting Quorum**

The respective representatives of all of the Capacity Owners that have appointed a representative to the Committee, less one, shall constitute a quorum.

(d) **Meetings by Telephone Conference**

Committee meetings pursuant to the Capacity Ownership Agreements may be conducted by telephone provided all Capacity Owners and, if appropriate, Bonneville, are notified pursuant to the procedures set forth in subsection 12(e) of any such meeting.

(e) **Meeting Notices**

- (1) All Committee meeting notices pursuant to the Capacity Ownership Agreements shall be provided in writing no less than 14 days prior to such meeting.
- (2) Any Committee meeting notice required by this section shall be deemed properly made if delivered in person, by electronic facsimile, or by mail or other qualified delivery service, postage prepaid, to the person specified below:

If to Bonneville:

Group Vice President for Marketing, Conservation and  
Production

Bonneville Power Administration

905 NE 11th Avenue

Portland, OR 97232

Telephone (503) 230-5152

Facsimile (503) 230-5207

If to Puget:

Vice President Power Planning

Puget Sound Power & Light Company

411 108th Avenue NE 15th Floor

Bellevue, WA 98004-5515

Telephone (206) 462-3137

Facsimile (206) 462-3175

If to Seattle:

Director, Power Management Division

Seattle City Light

1111 Third Avenue, Room 420

Seattle, WA 98101

Telephone (206) 386-4530

Facsimile (206) 386-4955

If to PNGC:

Director of Power Management

Pacific Northwest Generating Cooperative

711 NE Halsey Street, Suite 200

Portland, OR 97232

Telephone (503) 288-1234

Facsimile (503) 288-2334

If to Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201  
Telephone (206) 258-8211  
Facsimile (206) 258-8305

If to Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411  
Telephone (206) 502-8294  
Facsimile (206) 502-8628

If to PacifiCorp:

Senior Vice President, Wholesale Transactions  
and Transmission  
PacifiCorp Electric Operations  
825 NE. Multnomah Street, Suite 625  
Portland, OR 97232  
Telephone (503) 731-2157  
Facsimile (503) 731-2136

Attendance at a meeting by a representative of a Capacity Owner constitutes waiver by such Capacity Owner of notice of such meeting.

- (3) Either Party may, by written notice to the other Party and to the Capacity Owners other than PacifiCorp, change the designation, address, or facsimile number of the person so specified by it in subsection 12(a) or paragraph 12(e)(2).

13. **OPERATING PLAN AND AMENDMENTS TO THE OPERATING PLAN**

- (a) The provisions of this section shall become effective commencing August 1, 1995; provided, however, that unless and until the annual costs rate set forth in Exhibit B is approved by FERC on an interim basis, Bonneville shall not have any right pursuant to this Agreement to bill or charge to PacifiCorp, and PacifiCorp shall not have any obligation pursuant to this Agreement to pay to Bonneville, any amount pursuant to any Operating Plan.
  
- (b) **Delivery of Operating Plan**
  - (1) On or before August 1, 1995, Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1996 and an Operating Plan for Bonneville's PNW AC Intertie for fiscal year 1997.
  
  - (2) Not later than one year preceding the first day of each fiscal year, other than the fiscal years specified in paragraph 13(b)(1), Bonneville shall deliver to each Capacity Owner that has appointed a representative to the Committee an Operating Plan for Bonneville's PNW AC Intertie for such fiscal year.
  
- (c) Each Operating Plan delivered pursuant to subsection 13(b) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast costs for the fiscal year to which such Operating Plan pertains, and such Operating Plan may contain such other information as Bonneville may deem relevant; and each amendment of an Operating Plan delivered pursuant to subsection 13(k) shall contain the following information for Bonneville's PNW AC Intertie with respect to forecast or actual costs, as appropriate, for the fiscal year to which such Operating Plan pertains, and such amendment may contain such other information as Bonneville may deem relevant:

- (1) a forecast of, or the actual, Allocated Direct Cost of Operations Cost (pursuant to section I.C of Exhibit I), Indirect Cost of Operations Cost (pursuant to section I.D of Exhibit I), and Overhead Cost of Operations Cost (pursuant to section I.E of Exhibit I) in the format set forth in Exhibit I, Schedule A;
- (2) a forecast of, or the actual, Direct Cost of Maintenance Cost (pursuant to section II.B of Exhibit I), Indirect Cost of Maintenance Cost (pursuant to section II.D of Exhibit I), and Overhead Cost of Maintenance Cost (pursuant to section II.E of Exhibit I) in the format set forth in Exhibit I, Schedule B;
- (3) a forecast of, or the actual, Direct Cost of Replacements and Reinforcements (pursuant to section III.A of Exhibit I), Indirect Cost and Overhead Cost of Replacements and Reinforcements (pursuant to section III.B of Exhibit I), and AFUDC of Replacements and Reinforcements (pursuant to section III.C of Exhibit I) in the format set forth in Exhibit I, Schedule C, for each Reinforcement and Replacement which is expected to be, in the fiscal year to which the Operating Plan pertains, a planned new start, construction work in progress on a previously initiated Reinforcement or Replacement, as the case may be, or a closed work order. The forecast shall include for each such Reinforcement or Replacement an estimate of the total cost of construction and the cost to be incurred with respect to such Reinforcement or Replacement during each fiscal year until the work order for such Reinforcement or Replacement has been closed. Bonneville may elect, but shall not be required, to include in any such forecast the information *set forth in the immediately preceding sentence regarding any Replacement and Reinforcement which is expected to be planned a new start in any fiscal year following the fiscal year to which the Operating Plan pertains.* In the event Bonneville elects to forecast Direct Cost, Indirect Cost, and Overhead Cost of any Reinforcement or Replacement which is expected to be a

planned new start in any fiscal year subsequent to the fiscal year to which the Operating Plan pertains, Bonneville shall provide to the Committee such forecast costs, in the format set forth in Exhibit I, Schedule C (together with additional information pertinent to such forecast costs as required by paragraph 13(c)(9)), 30 days prior to the date such Operating Plan is delivered to the Committee pursuant to subsection 13(b). In addition, Bonneville shall include such forecast costs in the Operating Plan delivered to the Committee pursuant to subsection 13(b);

- (4) the General Plant Cost (pursuant to section IV of Exhibit I) in the format set forth in Exhibit I, Schedule D;
- (5) a forecast of, or the actual, Other Costs (pursuant to section V of Exhibit I) in the format set forth in Exhibit I, Schedule E;
- (6) a forecast of, or the actual, Contracts and Rates Costs (pursuant to section VI of Exhibit I) in the format set forth in Exhibit I, Schedule F;
- (7) a forecast of, or the actual, Power Scheduling Costs (pursuant to section VII of Exhibit I) in the format set forth in Exhibit I, Schedule G;
- (8) a forecast of, or the actual, End of Term Costs (pursuant to section VIII of Exhibit I) in the format set forth in Exhibit I, Schedule H. Such forecast shall include Bonneville's proposed apportionment of such End of Term Costs among PacifiCorp and Capacity Owners other than PacifiCorp and Bonneville's rationale for such apportionment;
- (9) additional information pertinent to the forecast costs, actual costs, and General Plant Cost provided pursuant to paragraphs 13(c)(1) through 13(c)(8), including, without limitation, descriptions of the activities or projects and explanations of the



costs comprising the Direct Cost components of such forecast costs, actual costs, and General Plant Cost, and explanations of MFU counts; and

- (10) if Bonneville has reviewed the loss factor in Exhibit E, Part A, pursuant to subsection 19(f), the Operating Plan shall contain the results of such review, including any revision to the loss factor in Exhibit E, Part A, pursuant to subsection 10(b), and any additional information pertinent to such review.

**(d) Requests by Committee**

- (1) No later than 15 days after the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), the Committee may make a single request of Bonneville in writing for:
  - (A) such supporting documentation, data, and information as may be reasonably necessary to analyze (i) the Operating Plan, or its constituent parts, delivered to the Committee pursuant to subsection 13(b), or (ii) any amendment to an Operating Plan pursuant to subsection 13(k); and
  - (B) *such documentation, data, and information relating to Bonneville's present or past activities or practices concerning Bonneville's PNW AC Intertie and to alternatives considered by Bonneville to costs or activities described in the Operating Plan or any amendment to an Operating Plan as may be reasonably necessary for the Committee to formulate recommendations pursuant to subsection 13(e);*

provided, however, that with regard to requests for documentation, data, and information pursuant to this paragraph 13(d)(1), the Committee must designate in such

request the specific item in the Operating Plan or in any amendment to an Operating Plan to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information. Such single request may contain multiple parts.

- (2) The Committee shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to paragraph 13(d)(1).
- (3) Bonneville shall have 20 days from the date it receives any request pursuant to paragraph 13(d)(1) to provide the documentation, data, and information requested; provided, however, that Bonneville shall be under no obligation (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Committee, or (D) to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or any regulation and Executive Order applicable to Bonneville.
- (4) The Committee in such request shall designate one of its members to be its representative for the sole purpose of receiving such documentation, data, or information from Bonneville pursuant to this subsection 13(d). Bonneville shall deliver such documentation, data, or information to the representative designated by the Committee to receive such materials.

- (5) For purposes of this subsection 13(d) and subsection 13(f), each of Bonneville and the Committee shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests for, documentation, data, and information and responses to such requests.
- (e) The Committee shall have 20 days from the date on which it receives documentation, data, or information from Bonneville pursuant to subsection 13(d) or, if none was requested, 50 days from the date on which the annual meeting was convened pursuant to paragraph 12(b)(4), whichever date is later, to recommend to Bonneville in writing a revision or revisions to any forecast cost or General Plant Cost in the Operating Plan. The Committee shall have the time periods set forth in subsection 13(m) to recommend to Bonneville in writing a revision or revisions to a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan. Such recommendation shall set forth, at a minimum, the exact revisions to the forecast cost or General Plant Cost proposed by the Committee and the reasons for such revisions. Failure of the Committee to recommend a revision or revisions to all or any portion of a forecast cost or General Plant Cost in the Operating Plan or a forecast cost or actual cost or General Plant Cost in any amendment to an Operating Plan within the applicable time limit set forth above shall be deemed to constitute acceptance by the Committee of all portions of the forecast costs and General Plant Cost of the Operating Plan for which the Committee has not recommended a revision.
- (f) No later than 15 days after receipt of a Committee recommendation made pursuant to subsection 13(e), Bonneville may make a single request (which may contain multiple parts) in writing of the Committee for such supporting documentation, data, and information as may be reasonably necessary to analyze the Committee's recommendation, including without limitation, any estimated costs or forecast costs contained in such recommendation; provided, however, that the Capacity Owners that have appointed a representative to the Committee shall be under no obligation (1) to create additional

documentation, data, or information, (2) to provide documentation, data, or information that is not readily available to the Committee or to any Capacity Owner that has appointed a member to the Committee, (3) to provide to Bonneville documentation, data, or information that the Committee has previously provided to Bonneville; provided, further, that with regard to requests for documentation, data, and information pursuant to this subsection 13(f), (1) Bonneville must designate in such request the specific item in the Committee's recommendation to which such requested documentation, data, or information is directly related and explain the need for such documentation, data, or information, and (2) Bonneville shall use reasonable efforts, consistent with Bonneville's needs as set forth in this subsection 13(f), to minimize and limit the scope and number of parts of the request for documentation, data, and information made pursuant to this subsection. Such single request shall be made of the Committee by delivering a copy of the request to each Capacity Owner that has appointed a representative to the Committee. The Committee shall have 20 days from the date of its receipt of Bonneville's request to provide a single response containing the documentation, data, and information requested.

- (g) If the Committee makes any recommendation in writing pursuant to subsection 13(e), Bonneville shall have the greater of 15 days from the date of receipt of the requested documentation, data, and information requested pursuant to subsection 13(f) or, if none was requested, 30 days from the date of receipt of the Committee's recommendations made pursuant to subsection 13(e) to, by written notice to each Capacity Owner that has appointed a representative to the Committee, accept the recommendation, accept the recommendation in part, reject the recommendation, or propose an action that is responsive to the Committee's recommendation and that is different from Bonneville's proposal contained in the Operating Plan. If Bonneville makes such a proposal, Bonneville shall set forth in such written notice the exact revisions to the Operating Plan. The Committee shall have 7 days from the date of receipt of Bonneville's proposal to make any requests in writing for supporting

documentation, data, and information as set forth in subsection 13(d). Bonneville shall have 7 days to respond to those requests as set forth in subsection 13(d). Failure of Bonneville to respond in writing to any recommendation of the Committee within the applicable time period set forth in this subsection 13(g) shall be deemed to constitute rejection of such recommendation.

- (h) If Bonneville rejects all or any portion of the Committee's recommendation, or if the Committee elects not to accept a proposal made by Bonneville pursuant to subsection 13(g), then the Committee may
  - (1) elect by written notice to Bonneville to refer to binding arbitration, pursuant to section 14 and consistent with subsections 13(i) and 14(b), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g); and
  - (2) elect by written notice to Bonneville to refer to nonbinding arbitration pursuant to section 15 and consistent with subsections 15(a) and 15(d), that portion of such recommendation of the Committee not accepted by Bonneville or that portion of a recommendation of the Committee to which Bonneville responded with a proposal pursuant to subsection 13(g).

**Failure of the Committee to elect to refer to arbitration**

- (A) such portion of any recommendation of the Committee not accepted by Bonneville within 15 days following Bonneville's rejection or acceptance in part of such recommendation of the Committee pursuant to subsection 13(g), or

(B) any proposal made by Bonneville pursuant to subsection 13(g) within 15 days following Bonneville's written notice of such proposal or, if documentation, data, or information was requested by the Committee pursuant to subsection 13(g), within 15 days following receipt by the Committee of such documentation, data, or information pursuant to subsection 13(g),

shall be deemed to constitute acceptance by the Committee of Bonneville's rejection or acceptance in part of the recommendation of the Committee or of Bonneville's proposal and waiver by the Committee of any right pursuant to this section 13 or to section 15 to arbitrate such recommendation or portion thereof.

(i) The Committee may, subject to the immediately succeeding sentence, arbitrate, pursuant to subsection 13(h), any recommendation by the Committee concerning a revision pursuant to this Agreement to a loss factor set forth in any Operating Plan or in any amendment to an Operating Plan or concerning any forecast cost or actual (allocated or otherwise) cost set forth in any Operating Plan or in any amendment to an Operating Plan (including the following costs and related items set forth in any Operating Plan, or in any amendment to an Operating Plan, pursuant to Exhibit I, Schedule A, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; Exhibit I, Schedule B, lines 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; Exhibit I, Schedule C, lines 1, 2, 3, 4 and 5; Exhibit I, Schedule D, lines 3, 4, 5, 6, 7, 8, 9, 10 and 11; Exhibit I, Schedule E, lines 2 and 3; Exhibit I, Schedule F, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; Exhibit I, Schedule G, lines 1, 2, 3, 4, 5, 6, 7, 8, and 9; and Exhibit I, Schedule H, lines 1, 2, 3, and 4). The Committee's right pursuant to this subsection 13(i) to arbitrate any such recommendation shall be subject to the following limitations:

(1) if such recommendation, or portion thereof, includes a Replacement Cost for a Replacement or a Reinforcement Cost for a Reinforcement, and such Replacement Cost or Reinforcement Cost was included in a previous Operating Plan

(either of such costs, a Previous Operating Plan Cost), the Committee may arbitrate pursuant to this subsection 13(i) such recommendation, or portion thereof, only to the extent that such recommendation, or portion thereof, includes any Replacement Cost or Reinforcement Cost in excess of the Previous Operating Plan Cost;

- (2) the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, pertaining to a revision to a loss factor pursuant to this Agreement only to the extent such arbitration is permitted by subsection 10(b);
- (3) the Committee may arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning an Other Cost only to the extent that such Other Cost is a cost set forth in an Operating Plan or amendment to an Operating Plan pursuant to Exhibit I, Schedule E, line 2 and such recommendation, or portion thereof pertains to whether such Other Cost is properly allocated to Bonneville's PNW AC Intertie pursuant to Exhibit I, section V;
- (4) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs, and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operations Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs, and forecast End of Term Costs set forth in such Operating Plan or in any amendment to an Operating Plan, the Committee may arbitrate pursuant to this subsection 13(i) any such recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan only to the extent that such actual cost exceeds 105 percent of the forecast cost for such activity or such project; provided, however, that, without limiting any of PacifiCorp's

rights and benefits pursuant to subsection 16(c), the Committee may not arbitrate pursuant to this subsection 13(i) any recommendation, or portion thereof, concerning any actual cost for any activity or project described in such Operating Plan or in any amendment to an Operating Plan if such actual cost is less than 105 percent of the forecast for such activity or such project;

- (5) the Committee may not arbitrate, pursuant to this subsection 13(i), (a) the allocation by Bonneville pursuant to this Agreement of any of its costs to overall overhead costs or to overall indirect costs, or (b) the allocation by Bonneville pursuant to this Agreement of a portion of Bonneville's overall overhead costs and overall indirect costs to its total system operations costs, its total system maintenance costs, its total capital costs or its total indirect and overhead power scheduling costs; provided, however, that nothing in this paragraph (5) shall be deemed to prevent or restrict the Committee from arbitrating pursuant to this subsection 13(i) the level (rather than the allocation) of any of Bonneville's Exhibit I, Schedule A, line 9 total system operations indirect costs and line 11 total system operations overhead costs; Bonneville's Exhibit I, Schedule B, line 11 total system maintenance indirect costs and line 13 total system maintenance overhead costs; Bonneville's total capital costs; Bonneville's Exhibit I, Schedule F, line 6 total indirect contracts and rates costs and Bonneville's Exhibit I, Schedule F, line 7 total overhead contracts and rates costs; or Bonneville's Exhibit I, Schedule G, line 6 total indirect power scheduling costs and Bonneville's Exhibit I, Schedule G, line 7 *total overhead power scheduling costs*;
- (6) the Committee may not arbitrate any recommendation, or any portion thereof, regarding any amendment to an Operating Plan made pursuant to sections 9(b)(2)(A)(iv) and 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2);



- (7) the Committee may not arbitrate any such recommendation, or portion thereof, to the extent that in doing so the arbitrators would be required to decide a matter of law in order to render a decision pursuant to subsection 14(h). If, subsequent to the Effective Date, Bonneville is given legal authority to submit to binding arbitration matters of law, Bonneville shall enter into good faith negotiations with PacifiCorp and Capacity Owners other than PacifiCorp regarding a revision to this paragraph 13(i)(7) enabling arbitration of matters of law pursuant to this subsection 13(i) consistent with such legal authority; and
- (8) the Committee may not arbitrate any recommendation, or portion thereof, regarding an allocation of a Reinforcement Cost to the extent prohibited by subsection 7(d).

In arbitrating any recommendation, or portion thereof, pursuant to this subsection 13(i), the Committee may raise in support of such recommendation arguments regarding whether any forecast or actual cost should be based upon activities different in degree, but not in kind, from the activities upon which such forecast or actual cost in the Operating Plan is based.

- (j) Each Operating Plan provided pursuant to subsection 13(b) which has completed the Committee review process set forth in subsections 13(d) through 13(g) shall take effect on the first day of the fiscal year to which such Operating Plan pertains and shall remain in effect for the duration of such fiscal year.
- (k) At any time during the fiscal year in which an Operating Plan is in effect, or within 8 months after the end of such fiscal year, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast or actual Operations Cost, Maintenance Cost, General Plant Cost, Other Cost, Contracts and Rates Cost, Power Scheduling Cost, or End of Term Cost in such Operating Plan. At any time during the fiscal year an Operating Plan

is in effect, or within 30 months after a work order for a Replacement or Reinforcement is closed, Bonneville may amend such Operating Plan, pursuant to subsections 13(l) through 13(n), to reflect a different forecast cost or actual cost component for such Replacement or Reinforcement.

- (l) Any amendment made to any Operating Plan pursuant to subsection 13(k) shall be provided by delivery of a copy in writing of such amendment by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (m) Consideration of amendments to the Operating Plan pursuant to subsection 13(l) shall be consistent with the procedures set forth above in subsections 13(c) through 13(k), except that the time limits set forth in such subsections shall be reduced as follows: 15 days shall be 7 days, 20 days shall be 10 days, 30 days shall be 15 days, and 50 days shall be 25 days. For purposes of computing the time limits in this subsection 13(m), the date Bonneville provides the Capacity Owners with a proposed amendment, pursuant to subsection 13(k), shall be deemed to be the date the annual meeting was convened for purposes of paragraph 13(d)(1) and subsection 13(e).
- (n) Without limiting any of PacifiCorp's rights and benefits pursuant to subsection 13(i) and sections 14 and 15, any Operating Plan amended pursuant to section 9(b)(2)(A)(v) or 9(b)(2)(B)(iii), or subsection 13(k) shall take effect when such amendment is accepted by the Committee pursuant to subsection 13(e) or 13(h). Any Operating Plan amended pursuant to section 9(b)(2)(A)(iii), 9(b)(2)(A)(iv), 9(b)(2)(B)(i), or 9(b)(2)(B)(ii), or subsection 14(j), 16(e), or paragraph 16(f)(2) shall take effect as soon as such amendment is delivered by Bonneville to each Capacity Owner that has appointed a representative to the Committee.
- (o) An Operating Plan shall, during the fiscal year in which such Operating Plan is in effect, establish the costs which PacifiCorp is obligated to pay pursuant to the terms and conditions of this

Agreement. In no event shall such Operating Plan, or any portion thereof, contain or constitute an obligation of Bonneville to undertake, or to expend funds on, activities described or indicated in such Operating Plan.

14. **ARBITRATION**

- (a) During any arbitration process conducted pursuant to this section 14, PacifiCorp shall act through the Committee. Each of Bonneville and PacifiCorp agrees to be bound by any decision rendered by the arbitrators in any arbitration brought pursuant to subsection 13(i) and this section 14.
- (b) The Committee may initiate arbitration pursuant to subsection 13(i) by taking the following actions:
  - (1) an affirmative vote to initiate arbitration by at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
  - (2) either of the following:
    - (a) giving written notice to Bonneville of the Committee's decision to initiate arbitration pursuant to subsection 13(i) within the applicable time period established in subsection 13(h); or
    - (b) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subsection 14(b) shall set forth in detail the matter or matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (c) Bonneville shall, within 10 Working Days after receipt of the notice by the Committee referred to in subsection 14(b), appoint a second arbitrator and provide by written notice to each Capacity Owner that has appointed a representative to the Committee the name, street address and telephone number of the arbitrator appointed by Bonneville. The two arbitrators appointed by the Committee and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville.
  - (1) If the arbitrators appointed by the Committee and by Bonneville, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by Bonneville, then within 30 days after the date of the appointment of an arbitrator by Bonneville, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
  - (2) If Bonneville fails to appoint an arbitrator within 15 days after receipt of the notice by the Committee referred to in subsection 14(b), then within 30 days after the date of such notice, the Committee may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.
  - (3) If, pursuant to either paragraph 14(c)(1) or 14(c)(2), the Committee applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Committee shall give Bonneville written notice of such application within 5 days after the date of filing such application.

- (d) The three arbitrators appointed pursuant to subsections 14(b) and 14(c) shall select by a majority vote an alternative pursuant to subsection 14(g).
- (e) Within 10 days after the appointment of a third arbitrator pursuant to subsection 14(c), the arbitrators shall establish a schedule for submission of written positions by Bonneville and PacifiCorp, respectively. The arbitrators must establish a schedule for such submissions pursuant to this subsection 14(e) that will allow the arbitration to be concluded, and the decision of the arbitrators rendered pursuant to subsection 14(g), within 120 days following the date of the appointment of the third arbitrator. A copy of any submission by the Committee to the arbitrators pursuant to this section 14 shall be simultaneously served by the Committee on Bonneville, and a copy of any submission by Bonneville to the arbitrators pursuant to this section 14 shall be simultaneously served by Bonneville on each Capacity Owner that has appointed a representative to the Committee. The Committee shall state, in a letter to the arbitrators, as its proposed alternative to each Bonneville proposal in dispute, the recommendation proposed by the Committee pursuant to subsection 13(g) and rejected in whole or in part by Bonneville pursuant to subsection 13(g). Bonneville shall state its position and proposed resolution of the dispute in a letter to the arbitrators. If Bonneville made a proposal in response to such recommendation of the Committee pursuant to subsection 13(g), then such position and proposed resolution shall set forth such proposal, or if Bonneville made no such proposal, then such position and proposed resolution shall set forth the relevant portion of the Operating Plan. If, however, the arbitration concerns an exception pursuant to paragraph 16(f)(3), then the positions and proposed resolutions of Bonneville and the Committee shall be as established pursuant to such subsection. The Committee may then submit a response to Bonneville's letter, and Bonneville may thereafter submit a reply to the Committee's response. Bonneville and the Committee shall have an equal number of days to prepare and serve their replies.

- (f) No submission by either the Committee or Bonneville to the arbitrators pursuant to subsection 14(e) shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Committee or Bonneville, and for good cause shown, the arbitrators may permit any submission by such Party to exceed 50 pages.
  
- (g) The arbitrators shall select, as between the Committee's recommendation pursuant to subsection 13(e), on the one hand, and the portion of Bonneville's proposed Operating Plan to which the Committee's recommendation pertains or Bonneville's proposal pursuant to subsection 13(g) not accepted by the Committee, on the other, the alternative which
  - (1) is consistent with the provisions of this Agreement and
  
  - (2) (A) in conformity with the generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area prior thereto, would better achieve the desired result consistent with safety, reliability, and cost-benefit or (B) if there are no such generally accepted practices, methods, and acts in the electrical utility industry in the Western Systems Coordinating Council area, would, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, be reasonably expected to better achieve the desired result consistent with safety, reliability, and cost-benefit.
  
- (h) In applying the standards set forth in subsection 14(g), the arbitrators shall take into consideration, among other things (a) that Bonneville and PacifiCorp each have responsibilities for service to customers within and without the Pacific Northwest region in accordance with applicable law, (b) that Bonneville and others jointly own the PNW AC Intertie and Bonneville owes contractual obligations to those parties regarding the PNW AC Intertie, (c) that Bonneville must operate, as a practical matter, the PNW AC Intertie in coordination with the operation of the interconnected intertie facilities in

California, and (d) that the PNW AC Intertie is a major import-export facility important to the service of loads in and out of the region.

- (i) In any arbitration pursuant to this section 14, the arbitrators shall choose, pursuant to subsection 14(g), only between the alternatives proposed by Bonneville and the Committee and shall have no authority to resolve such arbitration other than by selecting an alternative proposed by either Bonneville or the Committee.
- (j) Upon selection by the arbitrators of an alternative pursuant to subsection 14(g), then Bonneville shall amend the Operating Plan to cause it to conform to the decision of the arbitrators.
- (k) If the arbitrators have not made a selection of an alternative pursuant to subsection 14(i) before the date on which the Operating Plan becomes effective pursuant to subsection 13(j), then PacifiCorp shall make payments of annual charges pursuant to such Operating Plan. If the arbitrators subsequently select the Committee's alternative, then Bonneville shall, subsequent to amending such Operating Plan pursuant to subsection 14(j), refund to or bill PacifiCorp its pro rata share of the amount of the incremental difference between the costs set forth in such Operating Plan as amended pursuant to subsection 14(j) and 105 percent of the costs set forth in such Operating Plan, prior to its amendment pursuant to subsection 14(j), to the extent that such costs were incurred during the period from the first day of effectiveness of such Operating Plan pursuant to subsection 13(j) to the date of the arbitrators' decision, such refund to be made pursuant to subsection 9(f) and such payment to be made pursuant to subsection 9(b).
- (l) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 14 equal to  $1 \div (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay its own expenses related to the arbitration

proceeding including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.

- (m) Any judgment rendered by a court of competent jurisdiction upon an award made by the arbitrators pursuant to this section 14 may be entered in any court having jurisdiction thereof.

## 15. NONBINDING ARBITRATION

- (a) The Initiating Party (as defined in paragraph 15(e)(1)) may, subject to the immediately succeeding sentence, elect by written notice to Responding Party (as defined in paragraph 15(e)(1)) to refer to nonbinding arbitration pursuant to the other provisions of this section 15 the following: (i) if the Initiating Party is the Committee, any recommendation by the Committee, or any portion thereof, concerning any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 and (ii) any other issue, dispute, or controversy regarding the Parties' respective rights and obligations pursuant to this Agreement. The Initiating Party's right pursuant to this subsection 15(a) to arbitrate any recommendation or any issue, dispute or controversy shall be subject to the following limitations:
  - (1) the Initiating Party may not arbitrate pursuant to this subsection 15(a): (A) any recommendation with respect to an Operating Plan or any amendment to an Operating Plan or (B) any issue, dispute, or controversy, which recommendation, issue, dispute or controversy may be arbitrated pursuant to subsection 13(i) or 16(f);
  - (2) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation not permitted to be



arbitrated pursuant to paragraphs 13(i)(1), 13(i)(3), 13(i)(4), and 13(i)(8);

- (3) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning a loss factor or revision to a loss factor set forth in Exhibit E, Part A or Part B pursuant to this Agreement;
- (4) the Committee may not (but the PacifiCorp or Bonneville may) arbitrate pursuant to this subsection 15(a) any recommendation, issue, dispute, or controversy concerning any right or obligation of PacifiCorp pursuant to this Agreement that is not a right or obligation, as the case may be, of each other Capacity Owner under its respective Capacity Ownership Agreement; or
- (5) if the sum of the actual Operations Costs, actual Maintenance Costs, General Plant Costs, actual Other Costs, actual Contracts and Rates Costs, actual Power Scheduling Costs and actual End of Term Costs in any Operating Plan exceeds 105 percent of the sum of the forecast Operating Costs, forecast Maintenance Costs, General Plant Costs, forecast Other Costs, forecast Contracts and Rates Costs, forecast Power Scheduling Costs and forecast End of Term Costs set forth in such Operating Plan, the Committee may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 only to the extent that such actual cost exceeds 105 percent of the forecast for such activity or such project; provided, however, that, without limiting any of PacifiCorp's rights and benefits pursuant to section 16(f), no

Initiating Party may arbitrate pursuant to this subsection 15(a) any recommendation, or portion thereof, concerning any actual cost for any activity or project set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7 if such actual cost is less than 105 percent of the forecast for such activity or such project; and

- (6) the Initiating Party may not arbitrate pursuant to this subsection 15(a) any issue, dispute, or controversy (A) concerning matters of ratemaking (for purposes of this subsection 15(a), the term "ratemaking" shall mean the determination of matters appropriately determined pursuant to section 7(i) of the Regional Act, including (i) Bonneville's revenue requirements (including without limitation Bonneville's depreciation and repayment standards and planned net revenues for risk, but excluding program level issues determined in the Federal budget process), (ii) Bonneville's cost of service analysis (including functionalization, segmentation, and allocation of costs contained in such analysis, but excluding any allocation of costs contemplated in Exhibit I), (iii) Bonneville's rate design, and (iv) any related environmental analysis of proposed rates; (B) concerning a final action of Bonneville, which final action is not itself performance of any obligation of Bonneville or Bonneville's Administrator under this Agreement; or (C) concerning, or requiring the decision of, a matter not arising under this Agreement or the other Capacity Ownership Agreements.

- (b) Except as otherwise provided in paragraph 15(a)(4), all arbitrations pursuant to this section 15 shall be between Bonneville and the Committee.

- (c) A copy of any submission (including, without limitation, any statement of position or any brief) by the Initiating Party or the Responding Party to the arbitrators pursuant to this section 15 shall be simultaneously served by such party on the Responding Party or Initiating Party, respectively. No submission by either the Initiating Party or the Responding Party to the arbitrators shall be more than 50 pages in length (not including exhibits). If requested in writing by either the Initiating Party or the Responding Party, and for good cause shown, the arbitrators may permit any submission by such party to exceed 50 pages.
- (d) With respect to any arbitration pursuant to this section 15 of any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) Only the Committee may initiate arbitration with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7. The Committee may initiate nonbinding arbitration pursuant to this section 15 by taking the following actions:
- (A) an affirmative vote to initiate arbitration pursuant to this section 15 by the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one; and
- (B) either of the following:
- (i) giving written notice to Bonneville of the Committee's decision to initiate arbitration

pursuant to this section 15 within the applicable time period set forth in subsection 13(h); or

- (ii) giving written notice to Bonneville of the Committee's decision to initiate arbitration within 20 days after the date on which Bonneville notifies in writing each Capacity Owner that has appointed a representative to the Committee of Bonneville's disagreement with any exception pursuant to subsection 16(f).

The notice referred to in this subparagraph 15(d)(1)(B) shall (x) indicate that such vote has been taken and (y) set forth in detail the matters to be arbitrated and the name, street address and telephone number of the arbitrator appointed by the Committee.

- (2) The respective rights and obligations of the Committee and of Bonneville with respect to arbitration pursuant to this subsection 15(d), unless otherwise provided in this subsection 15(d), shall be as set forth in subsections 14(d) through 14(l).
- (e) With respect to any arbitration pursuant to this section 15 of any issue, dispute, or controversy other than with respect to any forecast cost or actual cost set forth in any Operating Plan or in any amendment to an Operating Plan pursuant to Exhibit I, Schedule A, lines 9 and 11; Exhibit I, Schedule B, lines 11 and 13; Exhibit I, Schedule D, lines 1 and 2; Exhibit I, Schedule F, lines 6 and 7; and Exhibit I, Schedule G, lines 6 and 7, the following shall apply:
- (1) The party (which term, for purposes of this subsection 15(e), shall refer to Bonneville, on the one hand, and to the Committee or PacifiCorp, on the other) initiating arbitration (Initiating Party) shall initiate arbitration pursuant to this section 15 by serving written notice on the other party (Responding Party) of its initiation of arbitration. If the

Committee is the party initiating arbitration, the Committee, in addition to serving such notice, shall initiate such arbitration by an affirmative vote to do so of at least the respective representatives of all of the Capacity Owners that have appointed representatives to the Committee, less one. The Committee shall indicate that such vote has been taken in such notice to Bonneville. Any such notice by an Initiating Party shall set forth in detail the following: (A) the issue, dispute, or controversy to be arbitrated and the Initiating Party's position regarding such issue, dispute, or controversy; (B) the relief sought by the Initiating Party; and (C) the name, street address, and telephone number of the arbitrator appointed by the Initiating Party. The Responding Party shall, within 15 days after receipt of the notice by the Initiating Party referred to in this subsection 15(e), appoint a second arbitrator and provide written notice to the Initiating Party and to the arbitrator appointed by the Initiating Party of the name, street address and telephone number of the arbitrator appointed by the Responding Party. The arbitrators appointed by the Initiating Party and by Bonneville, respectively, shall appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party.

- (A) If the arbitrators appointed by the Initiating Party and by the Responding Party, respectively, fail to appoint a third arbitrator within 15 days after the date of the appointment of an arbitrator by the Responding Party, then within 30 days after the date of the appointment of an arbitrator by the Responding Party the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of a third arbitrator.
- (B) If the Responding Party fails to appoint an arbitrator within 15 days after receipt of the notice by the Initiating Party referred to in paragraph 15(e)(1), then

within 30 days after the date of such notice the Initiating Party may apply to the Chief Judge of the United States District Court for the District of Oregon for appointment of two arbitrators.

(C) If, pursuant to either subparagraph 15(e)(1)(A) or 15(e)(1)(B), the Initiating Party applies to the Chief Judge of the United States District Court for the District of Oregon for appointment of one or more arbitrators, then the Initiating Party shall give the Responding Party written notice of such application within one day after the date of filing such application.

- (2) The three arbitrators appointed pursuant to paragraph 15(e)(1) shall decide any issue, dispute, or controversy by majority vote.
- (3) Within 20 days after the appointment of a third arbitrator pursuant to paragraph 15(e)(1) with respect to any arbitration pursuant to this subsection 15(e), the arbitrators shall establish a schedule for the completion of such arbitration. The first day pursuant to such schedule shall be hereafter referred to in this subsection 15(e) as the "Arbitration Commencement Date."
- (4) No later than 15 days after the Arbitration Commencement Date, the Initiating Party may make a single request in writing to the Responding Party for documentation, data, and information relevant to or reasonably necessary to support the Initiating Party's position communicated to the Responding Party pursuant to paragraph 15(e)(1). Such single request may contain multiple parts. The Initiating Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data, and information pursuant to this paragraph.

- (5) The Responding Party shall have 20 days from the date it receives the request from the Initiating Party pursuant to paragraph 15(e)(4) to provide the documentation, data, and information requested; provided, however, that the Responding Party shall be under no obligation pursuant to this paragraph 15(e)(5) (A) to create additional documentation, data, or information, (B) to provide documentation, data, or information that is not readily available to it, (C) to provide to the Committee documentation, data, or information that Bonneville has previously provided to the Initiating Party or (D) if Bonneville is the Responding Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Reform Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.
- (6) No later than 15 days after the Arbitration Commencement Date, the Responding Party may make a single request in writing to the Initiating Party for documentation, data and information relevant to Initiating Party's position communicated to the Responding Party pursuant to subsection 15(e)(4). Such single request may contain multiple parts. The Responding Party shall use reasonable efforts to minimize and limit the scope and number of parts of the request for documentation, data and information pursuant to this paragraph.
- (7) The Initiating Party shall have 20 days from the date it receives the request from the Responding Party pursuant to paragraph 15(e)(6) to provide the documentation, data and information requested; provided, however, that the Initiating Party shall be under no obligation pursuant to this paragraph 15(e)(7) (A) to create additional documentation, data, or

information, (B) to provide documentation, data or information that is not readily available to it, (C) to provide to the Responding Party documentation, data, or information that the Initiating Party has previously provided to the Responding Party or (D) if Bonneville is the Initiating Party, to provide documentation, data, or information that Bonneville would not otherwise be required to provide or that would otherwise be exempted from disclosure pursuant to the Freedom of Information Act, 5 U.S.C. section 552 (including, without limitation, the Freedom of Information Act of 1986), as amended or superseded, or pursuant to any regulation and Executive Order applicable to Bonneville.

- (8) For purposes of this subsection 15(e), each of the Initiating Party and the Responding Party shall cooperate and use reasonable efforts to, in a timely manner, resolve disputes regarding, and clarify requests by it for, documentation, data, and information and responses to such requests.
- (9) Within 65 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may state in reasonable detail its position regarding any issue, dispute or controversy to be arbitrated pursuant to this subsection 15(e) in a letter to the arbitrators and to the other party to the arbitration of such issue, dispute, or controversy. Within 85 days following the Arbitration Commencement Date, each of the Initiating Party and the Responding Party may submit a letter to the arbitrators and to the other party responding to the letter that the other submitted to the arbitrators pursuant to the immediately preceding sentence.
- (10) The arbitrators shall resolve any issue, dispute, or controversy pursuant to this subsection 15(e) by deciding (taking into consideration, among other things, any letter submitted by the Initiating Party or the Responding Party with respect to such issue, dispute, or controversy) whether the position of the



Initiating Party or the position of the Responding Party regarding the action taken or proposed to be taken by the Responding Party conforms more closely with the standard for such action set forth in this Agreement. The arbitrators shall have no authority to fashion a resolution of such arbitration other than pursuant to this paragraph 15(e)(10).

- (f) Any selection by the arbitrators of an alternative pursuant to subsection 15(d) and any decision by the arbitrators pursuant to subsection 15(e) shall be reported by the Initiating Party to the Bonneville Administrator (Administrator) for review within 30 days after such selection or decision is made. The Administrator shall either accept or reject in writing such selection or decision. If the Administrator fails to either accept or reject such selection or decision, as the case may be, within 90 days after such selection or decision is made, such selection or decision, as the case may be, shall be deemed to be accepted by the Administrator.
- (g) If the Administrator accepts any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e), such selection or decision shall become binding upon PacifiCorp and Bonneville at the time of its acceptance.
- (h) The Administrator may reject any selection by the arbitrators of an alternative pursuant to subsection 15(d) or any decision by the arbitrators pursuant to subsection 15(e) only for one or more of the following reasons:
  - (1) the arbitrators did not follow the arbitration procedures set forth in this section 15;
  - (2) the arbitrators decided a matter that is not a matter arising under this Agreement as set forth in paragraph 15(a)(6);

- (3) the arbitrators did not completely apply the appropriate standard for arbitration pursuant to this section 15;
  - (4) the arbitrators granted relief in contravention of this Agreement;
  - (5) the arbitrators' decision is not supported by substantial, competent evidence; or
  - (6) implementation of the arbitrators' decision would cause Bonneville to violate a statutory obligation of Bonneville's or would cause Bonneville to breach a contractual obligation not in contravention of this Agreement.
- (i) Bonneville shall be responsible to pay a fraction of the costs for the services and expenses of the arbitrators pursuant to this section 15 equal to  $1 \div (n + 1)$ , where "n" equals the number of Capacity Owners. The Committee shall be responsible to pay the balance of the costs for the services and expenses of the arbitrators. Each of Bonneville and the Committee shall pay for its own expenses related to the arbitration proceeding, including, without limitation, attorney fees, costs incurred in development and preparation of documents, staff costs, and compensation for consultants.
- (j) If the Initiating Party elects to arbitrate any issue, dispute, or controversy pursuant to this section 15, the Initiating Party must initiate arbitration of such issue, dispute, or controversy within one year following the occurrence of the event giving rise to such issue, dispute, or controversy. Failure of the Initiating Party to initiate arbitration of any such issue, dispute, or controversy within such one-year period shall constitute a waiver of the Initiating Party's right to arbitrate such issue, dispute, or controversy pursuant to this section 15.

## 16. AUDIT RIGHTS

- (a) The Committee shall have the right to perform an audit of Bonneville's books, records, and documents used in or relating to the determination of the Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to the Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(2)(B).
- (b) The Committee shall have the right to perform an audit of Bonneville's books, records and documents used in or relating to the determination of any Revised Adjusted Capacity Ownership Price, or used in or relating to any billing or refund with respect to any Revised Adjusted Capacity Ownership Price. Such audit shall be performed within 24 months after the date of Bonneville's bill or refund voucher rendered by Bonneville pursuant to subparagraph 9(a)(3)(B).
- (c) The Committee shall have the right to audit Bonneville's books, records, and documents (i) used in or relating to the determination of any charge (including, without limitation, any MFU count made pursuant to section I.A of Exhibit D) billed to PacifiCorp pursuant to paragraph 9(b)(2) and subsection 9(c), or (ii) used in or relating to any billing or refund with respect to any such charge. Such audit shall be performed within 36 months after the date of Bonneville's bill or refund voucher for such charge rendered by Bonneville to PacifiCorp pursuant to paragraph 9(b)(2) or subsection 9(c), as the case may be.
- (d) Bonneville shall not be responsible to pay any of the expenses incurred by any of the Capacity Owners in performing any audit pursuant to this section 16. Bonneville shall not directly charge PacifiCorp or any Capacity Owner other than PacifiCorp for Bonneville's costs incurred by Bonneville with respect to any audit pursuant to this section 16 unless Bonneville develops a general practice of charging, through direct charges, each of its customers for such costs incurred by Bonneville in connection with audits

undertaken pursuant to those customers' respective contracts with Bonneville.

- (e) After completing any audit specified above, the Committee shall promptly provide to Bonneville a written report of the results of such audit. If such audit report includes any exception taken as a result of such audit and Bonneville agrees with such exception, Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such audit exception,
- (1) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to PacifiCorp a revised bill or refund voucher pursuant to paragraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
  - (2) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and either (A) render to PacifiCorp a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (B) cause to be refunded to PacifiCorp as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by PacifiCorp's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this subsection 16(e) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such audit report is received by Bonneville to (but excluding) the date on which such amount is refunded to PacifiCorp.

- (f) If an audit report provided to Bonneville by PacifiCorp pursuant to subsection 16(e) includes any exception taken as a result of such audit and Bonneville does not agree with such exception, then the following shall apply:
- (1) Bonneville may, within 30 days following its receipt of such audit report, propose to the Committee a resolution of any inconsistency noted in any exception taken as a result of such audit;
  - (2) If the Committee accepts such resolution proposed by Bonneville, then Bonneville shall, within 30 days following Bonneville's receipt of such audit report and consistent with such resolution,
    - (A) if such exception is with respect to the Adjusted Lump Sum Payment or to any Revised Adjusted Lump Sum Payment, render to PacifiCorp a revised bill or refund voucher pursuant to subparagraph 9(a)(2)(B) or 9(a)(3)(B), respectively, with respect to such Adjusted Lump Sum Payment or such Revised Adjusted Lump Sum Payment, and
    - (B) if such exception is with respect to an Operating Plan, amend the Operating Plan to which such exception pertains and shall either (i) render to PacifiCorp a revised bill, consistent with such Operating Plan, pursuant to the applicable GTRSPs set forth in Exhibit A and to the Billing Provisions set forth in Part B of Exhibit B or (ii) cause to be refunded to PacifiCorp as a lump sum payment, within 30 days after the date on which such Operating Plan is so amended, an amount consistent with such Operating Plan (multiplied by PacifiCorp's Capacity Ownership Percentage).

The amount of any refund or bill payable pursuant to this paragraph 16(f)(2) shall be paid with interest on such amount calculated at a rate equal to the weighted average of Bonneville's then-outstanding bonds or other debt instruments from (and including) the date on which such resolution is accepted by the Committee to (but excluding) the date on which such amount is refunded to PacifiCorp; and

- (3) If the Committee does not accept such resolution, if any, proposed by Bonneville with respect to any such exception, or if Bonneville does not propose any such resolution, then the Committee
  - (A) shall have the right to arbitrate, pursuant to section 14, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to subsection 13(i); and
  - (B) shall have the right to arbitrate, pursuant to section 15, any cost with respect to which such exception is taken to the extent that such cost is permitted to be arbitrated pursuant to section 15.

The Committee must refer to arbitration pursuant to subparagraph 16(f)(3)(A) or 16(f)(3)(B) any cost to which exception is taken as a result of any audit within eight months after the date the Committee commences such audit. Failure of the Committee to elect to so refer to arbitration any cost within such eight-month period shall be deemed to constitute waiver by the Committee of any right pursuant to this section 16 to arbitrate such cost.

- (g) PacifiCorp shall have the right to participate in any audit pursuant to this section 16 only by acting through the Committee. If PacifiCorp chooses not to participate in any audit undertaken by the Committee, then PacifiCorp shall accept the findings of the Committee with respect to such audit and any resolution by the Committee and

Bonneville of any inconsistency noted in any exception taken as a result of such audit.

- (h) Any audits undertaken by the Committee shall be upon reasonable notice to Bonneville and at reasonable times and shall commence no more frequently than once in any 24 consecutive months. The audit rights provided in this section shall not be construed to permit a general audit of Bonneville's books, records, and documents. Audits shall be in conformance with generally accepted auditing standards. Prior to and for the duration of any audit, Bonneville shall retain all pertinent books, records, and documents prepared in the normal course of business. After commencement of an audit pursuant to subsection 16(a), 16(b), or 16(c), the Committee may request and Bonneville shall promptly provide reasonably available supporting documentation for any cost or charge subject to audit. If the Committee fails to commence an audit pursuant to subsection 16(a), 16(b), or 16(c) within the time periods set forth in subsection 16(a), 16(b), or 16(c), such failure shall constitute waiver by PacifiCorp of any right pursuant to this section 16 to arbitrate any charge or refund billed or refunded by Bonneville.
- (i) If PacifiCorp is operating pursuant to paragraph 3(b)(1), Bonneville shall have the right, at its own expense, to review PacifiCorp's books, records, and documents that directly pertain to the revenue reportable in PacifiCorp's accounting system where revenues received for wheeling for other entities would be booked for the purpose of verifying compliance with paragraph 3(b)(1). Bonneville shall have the right to perform such audit no more frequently than once every 36 months.

## 17. **PROTECTED AREAS**

PacifiCorp shall not use its Scheduling Share for transmission of power on the PNW AC Intertie from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by Bonneville unless PacifiCorp is required by regulatory authority to purchase

or provide transmission for the output of such project or unless Bonneville receives sufficient demonstration that a particular project would provide benefits to Bonneville's existing or planned fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program. The Parties agree that System Sales shall not be taken into consideration in any determination of whether PacifiCorp has used its Scheduling Share for transmission of power on the PNW AC Intertie from the hydroelectric projects referred to in the immediately preceding sentence. For purposes of this section 17, "System Sale" means any sale of power or energy to PacifiCorp or by a seller of power or energy, which power or energy is not resource-specific and is delivered to PacifiCorp at a point that connects one or more resources or transmission systems.

**18. ESTABLISHMENT AND MAINTENANCE OF RATES AND RELIEF FROM REGULATORY ACTION**

- (a) Bonneville shall use good faith efforts to maintain in effect such of the following rates that has been approved by FERC on an interim or final basis, during the rate approval period established by FERC for such rate:
  - (1) any rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date;
  - (2) the Initial Successor Rate;
  - (3) the Alternative Successor Rate; and
  - (4) the Bonneville Successor Rate.
  
- (b) If Bonneville's Administrator submits to FERC a rate that is different from that set forth in Exhibit B, Part A and Part B, on the Effective Date, as the first rate proposed by Bonneville (Initial Successor Rate) to replace the AC-93 rate set forth in Exhibit A or that is for a rate approval period which is less than the remainder of the Term following the expiration of the AC-93 rate, PacifiCorp may, within 90



days after Bonneville submits the Initial Successor Rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:

- (1) PacifiCorp may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
- (2) PacifiCorp may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PacifiCorp to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:
  - (A) This Agreement shall terminate upon the date Bonneville receives PacifiCorp's notification to terminate this Agreement pursuant to this subsection 18(b) except for those rights and obligations set forth in this paragraph 18(b)(2).
  - (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after PacifiCorp has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of PacifiCorp's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + I = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PacifiCorp to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(b).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

I = Interest on  $A - ((B/540) \times A)$ , accruing from (and including) the date of Bonneville's receipt of PacifiCorp's Initial Lump Sum Payment to (but excluding) the date on which Bonneville receives PacifiCorp' notification to terminate this Agreement pursuant to this subsection 18(a), at the 5-year Treasury note rate in effect on the date on which Bonneville receives PacifiCorp's Initial Lump Sum Payment.

(C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(b)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(b)(2)(B).

- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(b)(2)(B), Bonneville may accelerate payment to PacifiCorp of the amount of the Refunded Lump Sum Payment.

If PacifiCorp elects to proceed under this paragraph 18(b)(2), Bonneville shall not develop a rate or charge that would inequitably allocate to PacifiCorp and Capacity Owners other than PacifiCorp, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from PacifiCorp or any Capacity Owner other than PacifiCorp.

- (c) If FERC approves the Initial Successor Rate, the Alternative Successor Rate (as defined in subsection 18(d)), or the Bonneville Successor Rate (as defined in subsection 18(d)) for a term less than the remainder of the Term following the expiration of the AC-93 rate, and if Bonneville's Administrator thereafter submits to FERC a rate (Replacement Rate) that is different from the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis) or that is for a rate approval period which is less than the remainder of the Term following the expiration of the Initial Successor Rate, the Alternative Successor Rate or the Bonneville Successor Rate (whichever had been approved by FERC on an interim or final basis), PacifiCorp may, within 90 days after Bonneville submits such rate to FERC and without regard to FERC's interim or final disposition of such rate, elect by written notice to Bonneville to terminate this Agreement and shall in such notice to Bonneville elect to exercise one of the two following options:

- (1) PacifiCorp may elect to proceed pursuant to paragraphs 18(f)(1), 18(f)(2), and 18(f)(3); or
- (2) PacifiCorp may elect to have its Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PacifiCorp to Bonneville pursuant to subsection 9(a), refunded by Bonneville subject to the following terms and conditions:
  - (A) This Agreement shall terminate upon the date Bonneville receives PacifiCorp's notification to terminate this Agreement pursuant to this subsection 18(c) except for those rights and obligations set forth in this paragraph 18(c)(2).
  - (B) Bonneville shall refund within the next three succeeding rate periods but, in any event, within 8 years after PacifiCorp has made its election for such refund (such period to begin no later than the 25th month after Bonneville's receipt of PacifiCorp's notification to terminate this Agreement and to end on the 96th month after Bonneville's receipt of such notification) in equal monthly amounts an amount equal to the "Refunded Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) + R = \text{Refunded Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PacifiCorp to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement.

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

R = 2.5 times the amount paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the immediately preceding fiscal year times the ratio of (a) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the first fiscal year during the proposed rate approval period pursuant to the rate submitted by Bonneville to FERC to replace the immediately preceding annual costs rate over (b) the amount forecast to be paid pursuant to subparagraphs 9(b)(2)(A) and 9(b)(2)(B) for the same fiscal year were the immediately preceding annual costs rate to remain in effect; provided, however, that the ratio of (a) over (b) shall in no event be less than one for purposes of this subsection.

(C) Bonneville shall, subject to the immediately succeeding sentence, pay interest on the Refunded Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest payable pursuant to this subparagraph 18(c)(2)(C) shall be paid by Bonneville on the amount of each monthly amount of the Refunded Lump Sum Payment payable by Bonneville pursuant to subparagraph 18(c)(2)(B).

- (D) Bonneville shall refund the Refunded Lump Sum Payment pursuant to paragraph 9(f)(4).
- (E) At any time during the repayment period referenced in subparagraph 18(c)(2)(B), Bonneville may accelerate payment to PacifiCorp of the amount of Refunded Lump Sum Payment.

If PacifiCorp elects to proceed under this paragraph 18(c)(2), Bonneville shall not develop a special rate or charge that would inequitably allocate to PacifiCorp and Capacity Owners other than PacifiCorp, or to any of them, the cost to Bonneville of the Refunded Lump Sum Payment; provided, however, that such allocation shall not be deemed to be inequitable solely because it causes the recovery of a portion of the cost to Bonneville of the Refunded Lump Sum Payment from PacifiCorp or any Capacity Owner other than PacifiCorp.

The terms of this subsection 18(c) shall be effective through December 31, 2040.

- (d) If (i) FERC remands or approves a rate which materially differs from the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, or (ii) FERC grants final approval to a rate containing the terms set forth in Exhibit B, Part A and Part B, on the Effective Date, or to the Initial Successor Rate for a rate approval period of less than the remainder of the Term following the expiration of the AC-93 rate, or (iii) FERC remands or disapproves the Initial Successor Rate, then in any such event Bonneville, PacifiCorp, and Capacity Owners other than PacifiCorp shall use good faith efforts to develop an alternative successor rate (Alternative Successor Rate) which would place PacifiCorp in substantially the same position with respect to PacifiCorp's rights and obligations under this Agreement as if the rate schedule and Billing Provisions set forth in Exhibit B, Part A and Part B, on the Effective Date, had been approved by FERC for the remainder of the Term following the

expiration of the AC-93 rate. Bonneville, PacifiCorp, and Capacity Owners other than PacifiCorp shall use good faith efforts to reach agreement on an Alternative Successor Rate within 6 months after the date of the FERC order regarding the Initial Successor Rate contemplated in this subsection 18(d) or within the time period established in such FERC order, whichever is earlier.

- (1) If Bonneville, PacifiCorp, and Capacity Owners other than PacifiCorp reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, then Bonneville shall, subject to section 7(i) of the Regional Act, submit such Alternative Successor Rate to FERC for approval and confirmation.
- (2) If Bonneville, PacifiCorp, and Capacity Owners other than PacifiCorp do not reach such an agreement regarding an Alternative Successor Rate within the applicable time period referred to in the immediately preceding sentence, Bonneville shall develop a rate, which, among other things, in Bonneville's judgment, protects the rights and obligations of PacifiCorp and Capacity Owners other than PacifiCorp and, subject to section 7(i) of the Regional Act, shall submit such rate (Bonneville Successor Rate) to FERC for approval and confirmation.

Nothing in this subsection 18(d) shall limit or otherwise affect any provisions of subsection 18(b) or 18(c).

- (e) If Bonneville, PacifiCorp, and Capacity Owners other than PacifiCorp are unable to agree upon an Alternative Successor Rate pursuant to subsection 18(d), or if FERC approves the Alternative Successor Rate for a period of less than 15 years or with terms and conditions that differ from the terms and conditions of the Alternative Successor Rate, or if FERC remands the Alternative Successor Rate, or if FERC approves the Bonneville Successor Rate, PacifiCorp may elect, within 6 months of any of the foregoing events, to terminate this Agreement

and execute a long-term contract with Bonneville for firm wheeling on the PNW-PSW Intertie for a term not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to PacifiCorp's Capacity Ownership Share, pursuant to subsection 18(f).

- (f) Should PacifiCorp elect to proceed pursuant to paragraph 18(b)(1) or 18(c)(1) or subsection 18(e), the Parties shall take the following steps:
- (1) PacifiCorp shall provide Bonneville with written notification of its election to terminate this Agreement and with a written request for a long-term contract for firm wheeling on the PNW-PSW Intertie for a period not less than the remaining term of the agreement(s) specified in Exhibit J for wheeling of an amount of power on the PNW-PSW Intertie up to PacifiCorp's Capacity Ownership Share.
  - (2) As soon as practicable after receipt by Bonneville of the written notice sent pursuant to paragraph 18(f)(1), Bonneville shall offer to PacifiCorp a long-term contract for firm wheeling on the PNW-PSW Intertie of an amount of power equal to the amount of power specified in PacifiCorp's written request pursuant to paragraph 18(f)(1), such offered contract to contain other terms and conditions substantially similar to those then being offered by Bonneville to its other firm wheeling customers for transactions on the PNW-PSW Intertie.

The termination date of this Agreement shall be the same date as the effective date of the long-term contract for firm wheeling referred to in this paragraph 18(f)(2), and such date shall in any event be no more than 6 months after Bonneville's receipt of PacifiCorp's notification pursuant to paragraph 18(f)(1).

- (3) The long-term contract for firm wheeling offered to PacifiCorp pursuant to paragraph 18(f)(2) shall also contain provisions which:



- (A) Require Bonneville to credit or pay (any such payment to be made pursuant to paragraph 9(f)(4)), in equal monthly amounts during the term of such long-term contract for firm wheeling, against the amount payable by PacifiCorp to Bonneville pursuant to such long-term wheeling agreement an amount equal to the "Credited Lump Sum Payment" calculated as follows:

$$A - ((B/540) \times A) = \text{Credited Lump Sum Payment}$$

where:

A = The Initial Lump Sum Payment, Adjusted Lump Sum Payment, or any Revised Adjusted Lump Sum Payment, whichever has been most recently paid by PacifiCorp to Bonneville pursuant to subsection 9(a).

B = The number of months between the Effective Date and the termination date of this Agreement pursuant to this subsection 18(e).

540 = 12 months X 45-year period over which Bonneville will amortize the Initial Lump Sum Payment, Adjusted Lump Sum Payment, or such Revised Adjusted Lump Sum Payment, as the case may be.

- (B) Require Bonneville, subject to the immediately succeeding sentence, to credit or pay interest on the Credited Lump Sum Payment at a rate equal to Bonneville's weighted average interest rate on Bonneville's then-outstanding bonds and on Bonneville's then-outstanding debt instruments. Such interest to be credited or paid pursuant to this provision shall be credited or paid by Bonneville on the amount of each

monthly amount of the Credited Lump Sum Payment to be credited or paid by Bonneville pursuant to the provision set forth in subparagraph 18(f)(3)(A).

- (C) Permit Bonneville to accelerate payment to PacifiCorp of the amount of Credited Lump Sum Payment which remains uncredited at any time during the term of such long-term contract for firm wheeling.
  
- (g) PacifiCorp's right to terminate this Agreement pursuant to subsections 18(d) through 18(f) is a one-time only right that must be exercised after FERC action pursuant to subsection 18(d). If PacifiCorp fails to terminate the Agreement pursuant to subsection 18(e) as prescribed therein as a result of FERC action, PacifiCorp shall have no future rights to terminate the Agreement under this section 18 as a result of FERC action.
  
- (h) Bonneville shall use best efforts to establish and maintain in effect the AC-93 rate, set forth in Exhibit A, during the remainder of the Term, but only until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), that is confirmed and approved by FERC on an interim or final basis, becomes effective. If FERC does not confirm and approve on a final basis the AC-93 rate for a rate approval period of sufficient duration so that the AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or such other rate, becomes effective, then upon expiration of the rate approval period of such AC-93 rate, Bonneville shall submit to FERC a rate based on the methodology used to determine the AC-93 rate (revised AC-93 rate) and shall use best efforts to obtain a rate approval period for the revised AC-93 rate of sufficient duration so that the revised AC-93 rate is effective until the annual costs rate set forth in Exhibit B, or other rate submitted to FERC, pursuant to subsections 18(b) through 18(d), becomes effective. If, at any time during the Term, FERC does not confirm and approve on an interim or final basis the AC-93 rate or revised AC-93 rate for any reason other than the duration of the rate approval period,

Bonneville and PacifiCorp shall use best efforts to develop a rate that would replace the AC-93 rate or revised AC-93 rate, and Bonneville shall submit such rate to FERC, pursuant to section 7(i) of the Regional Act, for confirmation and approval if such rate is agreed to by Bonneville, PacifiCorp and Capacity Owners other than PacifiCorp. If Bonneville and PacifiCorp do not succeed in developing such rate, Bonneville shall submit to FERC, pursuant to section 7(i) of the Regional Act, a rate which in Bonneville's judgment recovers Bonneville's costs. Bonneville shall bill PacifiCorp, and PacifiCorp shall pay Bonneville, in accordance with the AC-93 rate or, if FERC does not confirm and approve on an interim or final basis the AC-93 rate, the rate confirmed and approved by FERC on an interim or final basis. Bonneville shall revise Exhibit A so that it contains, at a given time, the AC-93 or other rate confirmed and approved by FERC on an interim or final basis.

**19. EXHIBITS**

- (a) Exhibits A through J attached to this Agreement are by this reference made a part of this Agreement. In the event of a conflict between any provision in Exhibits A through J and the provisions of sections 1 through 23 of this Agreement, the provisions of sections 1 through 23 of this Agreement shall prevail.
  
- (b) Bonneville shall revise Exhibit A pursuant to subsections 18(g) and 18(h) and this subsection 19(b). The rate schedules attached hereto as Exhibit A have been conditionally or finally confirmed by FERC. If the final rate schedules which are approved by FERC are an amendment or modification of the initial rate schedules, the applicable amended or modified rate schedules and associated GTRSPs shall be attached to and made part of this Agreement effective as of the date specified in FERC's approval. The rate schedules and GTRSPs included in Exhibit A shall be replaced by successor rate schedules and provisions in accordance with the provisions of section 7(i) of the Regional Act and FERC rules.

- (c) Upon interim or final approval by FERC of any rate submitted to FERC pursuant to subsections 18(a) through 18(g), Bonneville shall revise Exhibit B so that Exhibit B contains such rate approved by FERC as contemplated in this subsection 19(c). For purposes of this Agreement, such rate shall be effective as of the date of effectiveness specified in FERC's approval of such rate. Subject to the provisions of subsections 18(a) through 18(g), the rate schedule set forth in Exhibit B, Part A and Part B, on the Effective Date, shall be replaced by successor rate schedules and provisions pursuant to section 7(i) of the Northwest Power Act and applicable FERC rules.
- (d) Bonneville shall revise or modify Exhibit C from time to time to reflect changes hereafter agreed to in writing by the Parties in PacifiCorp's Capacity Ownership Share, Capacity Ownership Percentage, Scheduling Percentage, and Scheduling Share.
- (e) Bonneville shall revise Exhibit D pursuant to subsection 9(a). Revision or modification of Exhibit D shall not require an executed amendment or revision to this Agreement.
- (f) Not more frequently than annually, Bonneville shall review and, as appropriate, revise Exhibit E, Part A, in accordance with Bonneville's standard methodology and formula for calculation of average losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie. Such methodology and formula are intended to forecast average annual actual losses incurred by Bonneville in providing transmission on Bonneville's PNW AC Intertie Operational Transfer Capability. Any changes to the loss methodology or formula, other than numerical values, shall be made only after consultation with the Committee. During such consultation, Bonneville shall provide to the Committee *material pertinent to such changes to the loss methodology or formula*. Upon conclusion of any review of the loss factor in Exhibit E, Part A, Bonneville shall present the results of its review, including any revisions to the loss factor in Exhibit E, Part A, to the Committee as part of the Operating Plan pursuant to section 13. If the Committee pursues arbitration pursuant to subsection 10(b) and

section 14, Bonneville shall revise Exhibit E, Part A, to reflect the selection of the arbitrators pursuant to subsection 14(j).

- (g) Bonneville shall revise the loss factor in Exhibit E, Part B, as necessary to equal the same factor for average losses as Bonneville generally applies to transmission over Bonneville's share of the PNW-PSW Intertie. Revision of Exhibit E, Part B, shall not require an executed amendment or revision to this Agreement.
- (h) Bonneville shall revise Exhibit F as appropriate to reflect the facilities in Bonneville's PNW AC Intertie. Revision or modification of Exhibit F shall not require an executed amendment or revision to this Agreement.
- (i) Bonneville shall revise Exhibit G as appropriate to reflect the complete list of all of the Capacity Owners and their respective Capacity Ownership Shares and Capacity Ownership Percentages from time to time pursuant to this Agreement.
- (j) Bonneville shall revise Exhibit H as appropriate to reflect all provisions required by statute or Executive Order. Revision or modification of Exhibit H shall not require an executed amendment or revision to this Agreement.
- (k) Bonneville shall revise Exhibit I to reflect changes as agreed to in writing by PacifiCorp and Capacity Owners other than PacifiCorp.
- (l) Bonneville shall revise Exhibit J as mutually agreed to in writing by the Parties.

## **20. RULES OF LAW**

- (a) Bonneville and PacifiCorp agree that each fully participated in the drafting of each provision of this Agreement. The rule of law interpreting ambiguities against the drafting Party shall not be

applicable to or utilized in resolving any dispute over the meaning or intent of this Agreement or any of its provisions.

- (b) This Agreement shall not be construed to establish a partnership, association, agency relationship, joint venture, or trust. Neither Party shall be under the control of or shall be or represent itself as, the agent of, or have a right or power to bind, the other Party without the other's express written consent, except as provided in this Agreement.
- (c) All applicable law is incorporated in and made part of this Agreement.

## 21. NOTICES

- (a) Unless the Agreement requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be served, given, or made if delivered in person or sent by acknowledged delivery, or sent by registered or certified mail, postage prepaid, to the persons addressed as set forth below:

To Bonneville:

Group Vice President for Marketing, Conservation and Production  
Bonneville Power Administration  
905 NE 11th Avenue  
Portland, OR 97232

To Puget:

Vice President Power Planning  
Puget Sound Power & Light Company  
411 108th Avenue NE 15th Floor  
Bellevue, WA 98004-5515

To Seattle:

Director, Power Management Division  
Seattle City Light  
1111 Third Avenue, Room 420  
Seattle, WA 98101

To PNGC:

Director of Power Management  
Pacific Northwest Generating Cooperative  
711 NE Halsey Street, Suite 200  
Portland, OR 97232

To Snohomish:

Manager of Power Supply  
Public Utility District No. 1 of Snohomish  
County, Washington  
2320 California Street  
P.O. Box 1107  
Everett, WA 98201

To Tacoma:

Light Division Superintendent  
Tacoma Public Utilities  
3628 S. 35th Street  
Tacoma, WA 98411

To PacifiCorp:

Senior Vice President, Wholesale Transactions  
and Transmission  
PacifiCorp Electric Operations  
825 NE. Multnomah Street, Suite 625  
Portland, OR 97232

- (b) Either Party may, by written notice to the other Party pursuant to subsection 21(a), change the address set forth in subsection 21(a) for the notifying Party.

- (c) All notices pursuant to this Agreement shall be effective on the date of receipt.

## 22. **WAIVER**

Any waiver at any time by a Party of its rights with respect to any matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent or other matter. Except as otherwise provided herein or as agreed in writing by the Parties, no provision in this Agreement may be waived except as documented or confirmed in writing.

## 23. **MISCELLANEOUS**

### (a) **Effect of Section Headings**

Section headings and subheadings appearing in this Agreement are inserted for convenience only and shall not be construed as interpretations of provisions of this Agreement.

### (b) **Amendments**

Except as may be expressly otherwise provided in this Agreement, this Agreement may be amended only with the express written consent of both of the Parties, and no provision of this Agreement shall be varied or contradicted by any oral agreement, course of dealing or performance or any other matter not hereafter set forth in a written agreement signed by both of the Parties.

### (c) **Entire Agreement**

This Agreement constitutes, on and as of the date hereof, the entire agreement of the Parties with respect to the subject matter of this Agreement, and all prior understandings or agreements, whether written or oral, between the Parties with respect to the subject matter of this Agreement are hereby superseded in their entireties.



**(d) No Third Party Beneficiaries**

There are no third party beneficiaries of this Agreement. This Agreement shall not be construed to create rights in, or to grant remedies to, any third party as a beneficiary of this Agreement or of any duty, obligation, or undertaking established herein.

**(e) Regulatory Approvals**

Each Party shall use its best efforts to obtain and maintain in effect regulatory approvals that are necessary to permit such Party to perform its obligations under this Agreement in accordance with its terms and conditions. Neither Party shall oppose in any way or seek to alter or amend the terms and conditions of this Agreement by application to or participation in any application of any regulatory authority or court having jurisdiction. PacifiCorp shall not oppose in any way or seek to alter or amend the terms or conditions of the annual costs rate set forth in Exhibit B, the CO-94 rate, the AC-93 rate, or any rate described in section 18 that is agreed to by the Parties subsequent to each entering into this Agreement, in any proceeding pursuant to section 7 of the Pacific Northwest Electric Power Planning and Conservation Act before FERC or in any court of competent jurisdiction.

**(f) Other Capacity Ownership Agreements**

If Bonneville offers to enter into (i) a Capacity Ownership Agreement with any other Capacity Owner or (ii) any written amendment of any Capacity Ownership Agreement (other than this Agreement), then Bonneville shall offer to PacifiCorp an amendment of this Agreement that contains the terms and conditions of such Capacity Ownership Agreement with such other Capacity Owner or of such written amendment, as the case may be. Bonneville shall advise, and use reasonable efforts to consult with, PacifiCorp during the development or consideration of any offer to any Capacity Owner other than

PacifiCorp to enter into a Capacity Ownership Agreement or any amendment of such agreement.

**(g) Singular and Plural Forms**

For purposes of interpreting and construing this Agreement, the singular form of a word shall include its plural and the plural form of a word shall include its singular, unless otherwise expressly provided by this Agreement.

**(h) Performance Pending Dispute**

Except as otherwise expressly provided in this Agreement, pending resolution of any dispute, issue, or controversy arising under this Agreement, the Parties shall each continue performance of their respective obligations pursuant to this Agreement.

**(i) Time Periods**

For purposes of calculating any time period prescribed by this Agreement, if the last day of the time period falls on a day that is not a Working Day, then the last day of the time period shall be the first Working Day following such day as would otherwise be the last day of the time period.

**(j) Double Counting**

In developing rates or charges under section 7 of the Pacific Northwest Electric Power Planning and Conservation Act for any rate period, Bonneville shall not set rates or charges that recover, more than once, the costs associated with capital projects that are paid or forecast to be paid under the CO-94 rate and the AC-93 rate and annual costs rate set forth in Exhibit B, or the remaining Bonneville's PNW AC Intertie costs forecast to be paid under the AC-93 rate and annual costs rate set forth in Exhibit B. Bonneville's forecast of revenues chargeable under the CO-94 rate, AC-93 rate, and annual costs rate

set forth in Exhibit B shall be based on the best available information, including information provided pursuant to section 13 of this Agreement.

In the event Bonneville proposes any wheeling rate for transmission service on Bonneville's main grid that includes costs of the PNW AC Intertie, such proposed rate shall include a credit or other mechanism that ensures that PacifiCorp is not charged any of the PNW AC Intertie costs for deliveries of power that utilize up to the PacifiCorp's Capacity Ownership Share, as that term is defined in this Agreement.

**(k) Committee Action**

Each of the Parties agrees that to the extent it is provided in sections 13, 14, and 16 that the Committee shall take any action or shall make any decision, such action or decision shall be taken or made, as the case may be, by the Committee, and not by PacifiCorp acting individually.

**(l) Fiscal Year**

For purposes of this Agreement, the term "fiscal year" shall mean Bonneville's fiscal year.

**(m) Rights and Remedies Cumulative**

All rights and remedies of either Party under this Agreement and at law and in equity shall be cumulative and not mutually exclusive and the exercise of one right or remedy shall not be deemed a waiver of any other right or remedy. Nothing contained in any provision of this Agreement shall be construed to limit or exclude any

right or remedy of either Party (arising on account of the breach or default by the other Party or otherwise) now or hereafter existing under any other provision of this Agreement, at law or in equity.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

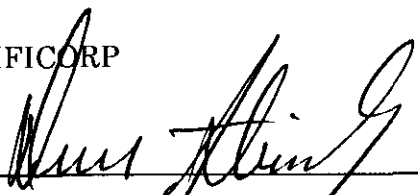
UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By   
*Senior Account Executive*

Name Patrick G. McRae  
*(Print/Type)*

Date December 28, 1994

PACIFICORP

By   
Name Dennis P. Steinberg  
*(Print/Type)*

Title Senior Vice President

Date December 27, 1994

Effective Date January 1, 1995

(PMLAN-MPB-W:PMT\CT94628.DOC)

Exhibit A, Page 1 of 1  
Contract No. DE-MS79-95BP94628  
PacifiCorp  
Effective on the Effective Date

**CO-94, AC-93, IS-93 Rate Schedules and General Transmission  
Rate Schedule Provisions**

(PMLAN-MPSD-WAPMT\CT94628EXA.DOC)

Schedule CO-94  
**CAPACITY OWNERSHIP RATE SCHEDULE**

**Section I. Availability**

This schedule applies to all agreements which provide life-of-facilities capacity rights to non-Federal participants (Capacity Owners) in 725 MW of Bonneville's PNW AC Intertie and any upgrades thereto. Service under this schedule is subject to Bonneville's General Transmission Rate Schedule Provisions.

**Section II. Rate**

The charge for capital and related costs for non-Federal capacity ownership in Bonneville's PNW AC Intertie shall be determined by the methodologies set out in Section III below.

**Section III. Determination of Rate**

**A. Capacity Ownership Price**

The charge for capacity ownership in Bonneville's PNW AC Intertie shall be the Capacity Ownership Share of the actual capital and related costs of facilities as determined by the formula shown below. The Capacity Ownership Share shall be determined pursuant to the Capacity Ownership agreement.

$$\frac{(A - B) + C + D}{E} = \text{Capacity Ownership Price in } \$/\text{kW}$$

Capacity Ownership Price in \$/kW x number of kW contracted for by Capacity Owner = Capacity Owner's payment to Bonneville

Where:

**A =** Bonneville's cost of new facilities for the Third AC Intertie, which increased the rated transfer capability of the PNW AC Intertie by approximately 1600 MW, is the construction costs (including direct, indirect and overhead costs) of the facilities associated with the Third AC Intertie System Reinforcements and the Alvey-Meridian

Transmission Line ( also known as Eugene-Medford 500-kV Transmission Line), referred to jointly as the Third AC Intertie Project.

- B = Bonneville's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project, which includes a portion of the construction costs (including direct, indirect and overhead costs) associated with the Third AC Intertie System Reinforcement.
- A-B = The cost of new facilities for the second 800 MW increment of the 1600 MW Third AC Intertie Project (presented in Exhibit C of the Capacity Ownership agreement).
- C = Allowance for Funds Used During Construction (AFUDC) constitutes interest on the funds used for the Third AC Intertie Project while it was under construction. AFUDC is calculated and capitalized consistent with FERC requirements as described in FERC's Uniform System of Accounts, 18 CFR, Part 101, Electric Plant Instructions, 3.A(17). The AFUDC applies to that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.
- D = Book value of existing Bonneville support facilities that are dedicated to the PNW AC Intertie equal to \$19,100,000.
- E = 725,000 kW, which equals Bonneville's share of the second 800 MW of the Third AC Intertie.

**B. PNW AC Intertie Upgrade Price**

The charge for upgrades to Bonneville's PNW AC Intertie facilities that occur after December 1993, and which result in an increase of rated transfer capability, shall be the Capacity Ownership Share of the capital and related costs of the upgrade. The Capacity Ownership Share of any upgrades shall be determined pursuant to the Capacity Ownership agreement. The capital costs shall consist of the construction costs (including direct, indirect and overhead costs) and AFUDC (as described in Section III.A. above) of the facilities associated with such upgrades.

#### **Section IV. Adjustments and Special Provisions**

##### **A. Initial Lump Sum Payment**

Capacity Owners shall make an initial, lump sum payment of an estimate of the Capacity Ownership Price equal to \$215/kW pursuant to the Capacity Ownership agreement.

##### **B. Adjustment to Reflect Actual Construction Costs**

Approximately December 1995 or as soon as practicable thereafter, the Capacity Owner's initial lump sum payment shall be adjusted to reflect the difference between the actual and the estimated Capacity Ownership Price. The actual Capacity Ownership Price shall be determined pursuant to Section III.A. above. There will be no adjustment for the book value of the support facilities dedicated to the PNW AC Intertie. Capacity Owners will either receive a refund, with interest, from Bonneville or make an additional payment, with interest, to Bonneville. Bonneville shall compute interest using the weighted average interest rate on Bonneville's outstanding bonds.

##### **C. PNW AC Intertie Upgrade Payments**

Capacity Owners shall pay a share of the upgrades to Bonneville's PNW AC Intertie in the manner and time to be determined when participation in such upgrades are agreed to pursuant to the Capacity Ownership agreement.



Schedule AC-93  
Southern Intertie Annual Cost

SECTION I. AVAILABILITY

This schedule is applicable to all parties (New Owners) that execute PNW AC Intertie Capacity Ownership Agreements (Agreements) and will be effective on the date described in the Agreement. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

SECTION II. RATE

The rate charges reflect the terms of the Memorandum of Understanding (MOU), signed in the Fall of 1991, between BPA and potential New Owners. The MOU provides for the payment by New Owners of their prorated share of: (1) BPA's annual operations, maintenance, and general plant expense (including applicable overheads) properly chargeable to the AC Intertie facilities; and (2) BPA's share of capitalized replacements on the AC Intertie. The monthly charge shall be the sum of the charges specified in sections II.A and II.B.

A. Operations, Maintenance, and General Plant

The monthly charge shall equal \$325 per megawatt of billing demand.

B. Replacements

The monthly charge shall equal 50 per megawatt of billing demand.

SECTION III. ADJUSTMENT TO  
REPLACEMENTS RATE

A. Determination of Billing Adjustment

New Owners will receive a billing adjustment if BPA incurs AC Intertie replacement cost during the rate period. The Replacements Rate Adjustment equals:

$$\frac{\text{AC Intertie work orders } (\$(\text{XK})) * \%}{725 \text{ MW} * \# \text{ months}}$$

where:

"# months" equals: (1) the number of months that this rate schedule is in effect during the fiscal year for the Initial Replacements Rate Adjustment; or (2) the number of months in the rate period for the Final Replacements Rate Adjustment; and

"%" equals the New Owners' percentage share of BPA's total AC Intertie Rated Transfer Capability as specified in the Agreements.

B. Initial Replacements Rate Adjustment

New Owners will receive a billing adjustment for each fiscal year that BPA incurs AC Intertie replacement cost. At the end of each fiscal year, the cost associated with AC Intertie capital replacement work orders that have closed during the fiscal year will be determined. The unit rate that would result using these closed work orders is the basis of the Initial Replacements Rate Adjustment.

1. Notice Provisions

Following each fiscal year, BPA shall notify all New Owners by December 15 of the proposed Replacements Rate Adjustment. BPA will provide the calculation of the adjustment and a short description of the work performed and the associated cost used as the basis for the billing adjustment. In addition to written notification, BPA may, but is not obligated to, hold a public meeting to clarify its determinations.

Schedule AC-93  
(Continued)

Written comments on the Initial Replacements Rate Adjustment will be accepted through the end of January. Consideration of comments submitted by the New Owners may result in the billing adjustment differing from the initially proposed adjustment. BPA shall notify all New Owners of the Initial Replacements Rate Adjustment by the last day of February.

2. Adjustment of Monthly Bills

An adjustment will be made on the New Owner's monthly bill prepared during March. The Initial Replacements Rate adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal year (i.e., the New Owner's share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal year). The Initial Replacements Rate Adjustment will appear as a charge to the New Owner on the monthly bill prepared during March.

C. Final Replacements Rate Adjustment

The actual costs associated with the AC Intertie capital replacement work orders that occur during the rate period may change after BPA performs its final analysis of the work orders. BPA shall compare the unit rate for the rate period using the results of the final work order analysis to the weighted average of the unit rates from the Initial Replacements Rate Adjustments.

1. Notice Provisions

BPA shall notify all New Owners in May 1998 of the results of the calculations, an explanation of work

order change(s), and any resulting billing adjustment. Written comments from New Owners will be accepted through the end of June. BPA shall notify all New Owners of the Final Replacements Rate Adjustment by July 31. Consideration of comments submitted by the New Owners may result in the Final Replacements Rate Adjustment differing from the initially proposed adjustment.

2. Adjustment of Monthly Bills

If the absolute value of the Final Replacements Rate Adjustment is greater than or equal to \$1 per megawatt per month, an adjustment will be made on the New Owner's monthly bill prepared during August. For each New Owner, the Final Replacements Rate Adjustment will be multiplied by the sum of the monthly billing factors from the relevant fiscal years (i.e., the New Owner's share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability multiplied by the number of months that this rate schedule is effective during the fiscal years). The Final Replacements Rate Adjustment will appear as a charge or credit to the New Owner on the monthly bill prepared during August. Interest, as determined by BPA's Office of Financial Management, will be included in any adjustment.

SECTION IV. BILLING FACTOR

The billing demand shall be the New Owner's capacity ownership share in megawatts of BPA's PNW AC Intertie Rated Transfer Capability as specified in the Agreement.

Schedule IS-93  
Southern Intertie Transmission

**SECTION I. AVAILABILITY**

This schedule supersedes IS-91 and is available for all transmission on the Southern Intertie. Service under this schedule is subject to BPA's General Transmission Rate Schedule Provisions.

**SECTION II. RATE**

**A. Nonfirm Transmission Rate**

The charge for nonfirm transmission of non-BPA power shall be 3.11 mills per kilowatthour of billing energy. This charge applies for both north-to-south and south-to-north transactions.

**B. Firm Transmission Rate**

The charge for firm transmission service shall be \$0.706 per kilowatt per month of billing demand and 1.69 mills per kilowatthour of billing energy. Firm transmission will only be made available to customers under this rate schedule who have executed a contract with BPA specifying use of the Firm Transmission rate for either north-to-south or south-to-north transactions.

**SECTION III. BILLING FACTORS**

- A. For services under Section II.A, the billing energy shall be the monthly sum of the scheduled kilowatthours, plus the monthly sum of kilowatthours allocated but not scheduled. The amount of allocated but not scheduled energy that is subject to billing may be reduced pro rata by BPA due to forced Intertie outages and other uncontrollable forces that may reduce Intertie capacity. The amount of allocated but not scheduled energy that is subject to billing

also may be reduced upon mutual agreement between BPA and the customer.

- B. For services under Section II.B, the billing demand shall be the Transmission Demand as defined in the Agreement. The billing energy shall be the monthly sum of scheduled kilowatthours, unless otherwise specified in the Agreement.

## General Transmission Rate Schedule Provisions

### SECTION I. ADOPTION OF REVISED TRANSMISSION RATE SCHEDULES AND GENERAL TRANSMISSION RATE SCHEDULE PROVISIONS (GTRSPs)

#### A. Approval of Rates

These rate schedules and GTRSPs shall become effective upon interim approval or upon final confirmation and approval by FERC. BPA will request FERC approval effective October 1, 1993.

#### B. General Provisions

These 1993 Transmission Rate Schedules and associated GTRSPs are virtually identical to and supersede BPA's 1991 Transmission Rate Schedules and GTRSPs (which became effective October 1, 1991) but do not supersede prior rate schedules required by agreement to remain in force.

Transmission service provided shall be subject to the following Acts, as amended: the Bonneville Project Act, the Regional Preference Act (P.L. 88-552), the Federal Columbia River Transmission System Act, and the Pacific Northwest Electric Power Planning and Conservation Act, and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992).

The meaning of terms used in the transmission rate schedules shall be as defined in agreements or provisions which are attached to the Agreement or as in any of the above Acts.

#### C. Interpretation

If a provision in the executed Agreement is in conflict with a provision contained herein, the former shall prevail.

### SECTION II. BILLING FACTOR DEFINITIONS AND BILLING ADJUSTMENTS

#### A. Billing Factors

##### 1. Scheduled Demand

The largest of hourly amounts wheeled which are scheduled by the customer during the time period specified in the rate schedules.

##### 2. Metered Demand

The Metered Demand in kilowatts shall be the largest of the 60-minute clock-hour integrated demands measured by meters installed at each POD during each time period specified in the applicable rate schedule. Such measurements shall be made as specified in the Agreement. BPA, in determining the Metered Demand, will exclude any abnormal readings due to or resulting from: (a) emergencies or breakdowns on, or maintenance of, the FCRTS; or (b) emergencies on the customer's facilities, provided that such facilities have been adequately maintained and prudently operated as determined by BPA. If more than one class of power is delivered to any POD, the portion of the metered quantities assigned to any class of power shall be as agreed to by the parties. The amount so assigned shall constitute the Metered Demand for such class of power.

3. Transmission Demand

The demand as defined in the Agreement.

4. Total Transmission Demand

The sum of the transmission demands as defined in the Agreement.

5. Ratchet Demand

The maximum demand established during the previous 11 billing months. Exception: If a Transmission Demand or Total Transmission Demand has been decreased pursuant to the terms of the Agreement during the previous 11 billing months, such decrease will be reflected in determining the Ratchet Demand.

B. Billing Adjustments

Average Power Factor

The adjustment for average power factor, when specified in a transmission rate schedule or in the Agreement, shall be made in accordance with the average power factor section of the General Wheeling Provisions.

To maintain acceptable operating conditions on the Federal system, BPA may restrict deliveries of power at any time that the average leading power factor or average lagging power factor for all classes of power delivered to such point or to such system is below 85 percent.

SECTION III. OTHER DEFINITIONS

Definitions of the terms below shall be applied to these provisions and the Transmission Rate Schedules, unless otherwise defined in the Agreement.

A. Agreement

An agreement between BPA and a customer to which these rate schedules and provisions may be applied.

B. Eastern Intertie

The segment of the FCRTS for which the transmission facilities consist of the Townsend-Garrison double-circuit 500 kV transmission line segment including related terminals at Garrison.

C. Electric Power

Electric peaking capacity (kW) and/or electric energy (kWh).

D. Federal Columbia River Transmission System

The transmission facilities of the Federal Columbia River Power System, which include all transmission facilities owned by the government and operated by BPA, and other facilities over which BPA has obtained transmission rights.

E. Firm Transmission Service

Transmission service which BPA provides for any non-BPA power except for transmission service which is scheduled as nonfirm. If the firm service is provided pursuant to the Agreement, the terms of the Agreement may further define the service.

F. Integrated Network

The segment of the FCRTS for which the transmission facilities provide the bulk of transmission of electric power within the Pacific Northwest, excluding facilities not segmented to the network as shown in the Wholesale Power Rate Development Study used in BPA's rate development.

**G. Main Grid**

As used in the FPT and IR rate schedules, that portion of the Integrated Network with facilities rated 230 kV and higher.

**H. Main Grid Distance**

As used in the FPT rate schedules, the distance in airline miles on the Main Grid between the POI and the POD, multiplied by 1.15.

**I. Main Grid Interconnection Terminal**

As used in the FPT rate schedules, Main Grid terminal facilities that interconnect the FCRTS with non-BPA facilities.

**J. Main Grid Miscellaneous Facilities**

As used in the FPT rate schedules, switching, transformation, and other facilities of the Main Grid not included in other components.

**K. Main Grid Terminal**

As used in the FPT rate schedules, the Main Grid terminal facilities located at the sending and/or receiving end of a line exclusive of the interconnection terminals.

**L. Nonfirm Transmission Service**

Interruptible transmission service which BPA may provide for non-BPA power.

**M. Northern Intertie**

The segment of the FCRTS for which the transmission facilities consist of two 500 kV lines between Custer Substation and the United States-Canadian border, one 500 kV line between Custer and Monroe Substations, and two 230 kV lines from Boundary Substation to the United States-Canadian border, and the associated substation facilities.

**N. Point of Integration (POI)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is made available to BPA for wheeling.

**O. Point of Delivery (POD)**

Connection points between the FCRTS and non-BPA facilities where non-Federal power is delivered to a customer by BPA.

**P. Secondary System**

As used in the FPT and IR rate schedules, that portion of the Integrated Network facilities with operating voltage of 115 kV or 69 kV.

**Q. Secondary System Distance**

As used in the FPT rate schedules, the number of circuit miles of Secondary System transmission lines between the secondary POI and the Main Grid or the secondary POD, or the Main Grid and the secondary POD.

**R. Secondary System Interconnection Terminal**

As used in the FPT rate schedules, the terminal facilities on the Secondary System that interconnect the FCRTS with non-BPA facilities.

**S. Secondary System Intermediate Terminal**

As used in the FPT rate schedules, the first and final terminal facilities in the Secondary System transmission path exclusive of the Secondary System Interconnection terminals.

**T. Secondary Transformation**

As used in the FPT rate schedules, transformation from Main Grid to Secondary System facilities.

#### U. Southern Intertie

The segment of the FCRTS for which the major transmission facilities consist of two 500 kV AC lines from John Day Substation to the Oregon-California border; a portion of the 500 kV AC line from Buckley Substation to Summer Lake Substation; when completed, the Third AC facilities, which include Captain Jack Substation and the Alvey-Meridian 500 kV AC line; one 1,000 kV DC line between the Celilo Substation and the Oregon-Nevada border; and associated substation facilities.

#### V. Transmission Service

As used in the MT rate schedule, Transmission Service is as defined in the Western Systems Power Pool Agreement.

### SECTION IV. BILLING INFORMATION

#### A. Payment of Bills

Bills for transmission service shall be rendered monthly by BPA. Failure to receive a bill shall not release the customer from liability for payment. Bills for amounts due of \$50,000 or more must be paid by direct wire transfer; customers who expect that their average monthly bill will not exceed \$50,000 and who expect special difficulties in meeting this requirement may request, and BPA may approve, an exemption from this requirement. Bills for amounts due BPA under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by BPA. The procedures to be followed in making direct wire transfers will be provided by the Office of Financial Management and updated as necessary.

##### 1. Computation of Bills

The transmission billing determinant is the electric power quantified by the

method specified in the Agreement or Transmission Rate Schedule. Scheduled power or metered power will be used.

The transmission customer shall provide necessary information to BPA for any computation required to determine the proper charges for use of the FCRTS, and shall cooperate with BPA in the exchange of additional information which may be reasonably useful for respective operations.

Demand and energy billings for transmission service under each applicable rate schedule shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents through 99 cents to the next higher dollar.

##### 2. Estimated Bills

At its option, BPA may elect to render an estimated bill to be followed at a subsequent billing date by a final bill. The estimated bill shall have the validity of and be subject to the same payment provisions as a final bill.

##### 3. Billing Month

For charges based on scheduled quantities, the billing month is the calendar month. For charges based on metered quantities, the billing month is defined as the interval between scheduled meter-reading dates. The billing month will not exceed 31 days in any case. While it may be necessary to read meters on a day other than the scheduled meter-reading date, for determination of billing demand, the billing month will cease at 2400 hours on the last scheduled meter-reading date. Schedules will be predetermined. The customer must give 30 days notice to request a change to the schedule.

4. Due Date

Bills shall be due by close of business on the 20th day after the date of the bill (due date). Should the 20th day be a Saturday, Sunday, or holiday (as celebrated by the customer), the due date shall be the next following business day.

5. Late Payment

Bills not paid in full on or before close of business on the due date shall be subject to a penalty charge of \$25. In addition, an interest charge of one-twentieth percent (0.05 percent) shall be applied each day to the sum of the unpaid amount and the penalty charge. This interest charge shall be assessed on a daily basis until such time as the unpaid amount and penalty charge are paid in full.

Remittances received by mail will be accepted without assessment of the charges referred to in the preceding paragraph provided the postmark indicates the payment was mailed on or before the due date. Whenever a power bill or a portion thereof remains unpaid subsequent to the due date and after giving 30 days' advance notice in writing, BPA may cancel the contract for service to the customer. However, such cancellation shall not affect the customer's liability for any charges accrued prior thereto under such agreement.

6. Disputed Billings

In the event of a disputed billing, full payment shall be rendered to BPA and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified above. BPA shall separately account for the disputed amount. If it is determined that the customer is entitled to the disputed

amount, BPA shall refund the disputed amount with interest, as determined by BPA's Office of Financial Management.

BPA retains the right to verify, in a manner satisfactory to the Administrator, all data submitted to BPA for use in the calculation of BPA's rates and corresponding rate adjustments. BPA also retains the right to deny eligibility for any BPA rate or corresponding rate adjustment until all submitted data have been accepted by BPA as complete, accurate, and appropriate for the rate or adjustment under consideration.

7. Revised Bills

As necessary, BPA may render a revised bill.

- a. If the amount of the revised bill is less than or equal to the amount of the original bill, the revised bill shall replace all previous bills issued by BPA that pertain to the specified customer for the specified billing period and the revised bill shall have the same date as the replaced bill.
- b. If a revision causes an additional amount to be due BPA or the specified customer beyond the amount of the original bill, a revised bill will be issued for the difference and the date of the revised bill shall be its date of issue.



## Annual Costs Rate

### A. PROPOSED SOUTHERN INTERTIE ANNUAL COST RATE

#### SECTION I. AVAILABILITY

This schedule is applicable to each party (Capacity Owner) that executes a PNW AC Intertie Capacity Ownership Agreement (Agreement). Billings pursuant to this schedule is subject to the Billing Provisions in Exhibit B of the Agreement. This rate schedule shall be effective on the first day of the fiscal year following the earlier of interim or final FERC approval of this rate schedule. Unless otherwise defined in this rate schedule, capitalized terms used in this rate schedule shall have the respective definitions set forth in section 1 of this Agreement.

#### SECTION II. RATE

##### A. Operations

The monthly charge equals:

$$\frac{\text{Operations Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Operations Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Operations Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any Allocated Direct Costs for Bonneville’s PNW AC Intertie, operations Indirect Costs for Bonneville’s PNW AC Intertie, and operations Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section I of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Operations rate shall be calculated using the forecast Operations Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is

amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Operations Cost shall be calculated using the forecast Operations Cost less the Operations Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **B. Maintenance**

The monthly charge equals:

$$\frac{\text{Maintenance Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Maintenance Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Maintenance Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any maintenance Direct Costs for Bonneville’s PNW AC Intertie, maintenance Indirect Costs for Bonneville’s PNW AC Intertie, and maintenance Overhead Costs for Bonneville’s PNW AC Intertie for such fiscal year, each being determined in accordance with section II of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Maintenance rate shall be calculated using the forecast Maintenance Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Maintenance Cost shall be calculated using the forecast Maintenance Cost less the Maintenance Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

## **C. General Plant**

The monthly charge equals:

$$\frac{\text{General Plant Cost} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to General Plant Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“General Plant Cost” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year any costs (including direct costs, indirect costs, overhead costs, and AFUDC) for Bonneville’s general plant investment for such fiscal year. The method for determining General Plant Cost is set forth in section IV of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the General Plant rate shall be calculated using the General Plant Cost in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for General Plant Cost shall be calculated using the General Plant Cost less the General Plant Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **D. Other Costs**

The monthly charge equals:

$$\frac{\text{Other Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Other Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Other Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s other costs for Bonneville’s PNW AC Intertie described in and determined pursuant to section V of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the Other Costs rate shall be calculated using the forecast Other Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Other Costs shall be calculated using the forecast Other Costs less the Other Costs already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **E. Contracts and Rates**

The monthly charge equals:

$$\frac{\text{Contracts and Rates Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Contracts and Rates Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Contracts and Rates Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any fiscal year Bonneville’s total contracts and rates costs (as described in section VI of Exhibit I) for such fiscal year as functionalized and allocated in accordance with section VI of Exhibit I to determine Contracts and Rates Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Contracts and Rates Cost is determined in accordance with section VI of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Contracts and Rates Cost determined in accordance with section VI of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Contracts and Rates rate shall be calculated using the forecast Contracts and Rates Costs in the Operating Plan in effect during the

month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for Contracts and Rates Cost shall be calculated using the forecast Contracts and Rates Cost less the Contracts and Rates Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **F. Power Scheduling**

The monthly charge equals:

$$\frac{\text{Power Scheduling Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to Power Scheduling Cost, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“Power Scheduling Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s total power scheduling costs (as described in section VII of Exhibit I) as functionalized and allocated in accordance with section VII of Exhibit I to determine Power Scheduling Costs for Bonneville’s PNW AC Intertie.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

Power Scheduling Cost is determined in accordance with section VII of Exhibit I as of the Effective Date. If Exhibit I is amended pursuant to subsection 19(k) of the Agreement to provide that the Power Scheduling Cost determined in accordance with section VII of Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains) is directly assigned to the Capacity Owners pursuant to such amended Exhibit I (and reflected in the Operating Plan for the fiscal year to which such Operating Plan pertains), the Capacity Ownership Percentage in the monthly charge calculation for such fiscal year shall be replaced by the ratio of (a) each Capacity Ownership Share to (b) the sum of all Capacity Ownership Shares.

The monthly charge for the Power Scheduling rate shall be calculated using the forecast Power Scheduling Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan

pertains, the monthly charge for Power Scheduling Cost shall be calculated using the forecast Power Scheduling Cost less the Power Scheduling Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **G. End of Term**

The monthly charge shall equal:

$$\frac{\text{End of Term Costs} * \text{Capacity Ownership Percentage}}{\text{Months}}$$

Where

“Months” is equal to 12, or, if the Operating Plan has, during the fiscal year to which such Operating Plan pertains, been amended with respect to End of Term Costs, the number of full months remaining in the fiscal year after such amended Operating Plan becomes effective for which Capacity Owners have not been billed.

“End of Term Costs” means, upon and after the effective date of Exhibit B pursuant to this Agreement, Bonneville’s costs associated with decommissioning the PNW AC Intertie determined in accordance with section VIII of Exhibit I.

“Capacity Ownership Percentage” is as defined in subsection 1(k) of each Capacity Owner’s Agreement.

The monthly charge for the End of Term rate shall be calculated using the forecast End of Term Costs in the Operating Plan in effect during the month for which the monthly charge is calculated; provided, however, if the Operating Plan is amended during the fiscal year to which such Operating Plan pertains, the monthly charge for End of Term Costs shall be calculated using the forecast End of Term Costs less the End of Term Cost already billed for such fiscal year for the remaining months of the fiscal year following such amendment.

#### **H. Replacements and Reinforcements**

1. For each Replacement, the charge equals:

$$\text{Replacement Cost} * \text{Capacity Ownership Percentage}$$

2. For each Reinforcement, the charge equals:

$$\text{Reinforcement Cost} * \text{Capacity Ownership Percentage}$$

Where

"Replacement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Replacement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Replacement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Replacement Cost does not include capitalized general plant cost. The method for determining Replacement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Reinforcement Cost" means, upon and after the effective date of Exhibit B pursuant to this Agreement, for any Reinforcement, the Direct Costs, Indirect Costs, Overhead Costs, and AFUDC for such Reinforcement, all capitalized to plant-in-service together with (1) simple interest on the foregoing costs accrued from the date on which Bonneville stops accruing AFUDC on the foregoing costs until the due date of the bill to Capacity Owner for the foregoing costs pursuant to subparagraph 9(b)(2)(B) and (2) the costs of removal and any salvage credit associated with removal or replacement of existing facilities. Reinforcement Cost does not include capitalized general plant cost. The method for determining Reinforcement Costs for Bonneville's PNW AC Intertie is set forth in section III of Exhibit I.

"Capacity Ownership Percentage" is as defined in subsection 1(k) of each Capacity Owner's Agreement.

The charge for the Replacements and Reinforcements rate shall use the actual Replacement Cost and Reinforcement Cost in the Operating Plan.

### **SECTION III. ADJUSTMENTS**

If an amendment to the Operating Plan results in a net amount that Bonneville owes the Capacity Owners pursuant to sections II.A-G or pursuant to section II.H, Bonneville shall refund such net amount pursuant to paragraph 9(f)(4) of the Agreement.

The monthly charges assessed Capacity Owners under sections II.A-G shall be adjusted, and payment or refund made with interest, pursuant to paragraphs 9(b)(2) or 9(f)(4) of the Agreement, to reflect amendments to the Operating Plan that occur after the year to which such Operating Plan pertains.

A Capacity Owner's share of the adjustment shall be determined using the same Capacity Ownership Percentage used in the billings under sections II.A-G during the fiscal year that such Operating Plan is effective.



**B. BILLING PROVISIONS**

**I. General Provisions**

**A. Approval of Rates**

The annual costs rate shall become effective upon interim approval or upon final confirmation and approval by FERC. Bonneville will request FERC approval of such rate schedule effective on the first day of a Bonneville fiscal year.

**B. Application of Billing Provisions**

These Billing Provisions shall apply to bills rendered by Bonneville pursuant to the annual costs rate.

**C. Definition of Terms**

The meaning of terms used in the AC-95 rate shall be as defined in the Agreement or, if no definition is provided by the Agreement, such terms shall be defined according to applicable Federal law.

**II Billing Information**

**Payment of Bills**

Charges pursuant to the AC-95 rate shall be included in Bonneville's monthly power bill to Capacity Owner. Failure to receive a power bill shall not release Capacity Owner from liability for payment. Power bills for amounts due of \$50,000 or more must be paid by direct wire transfer. If Capacity Owner anticipates special difficulties in meeting this requirement, Capacity Owner may request and Bonneville may approve an exemption from this requirement. Power bills for amounts due Bonneville under \$50,000 may be paid by direct wire transfer or mailed to the Bonneville Power Administration, P.O. Box 6040, Portland, Oregon 97228-6040, or to another location as directed by Bonneville. The procedures to be followed in making direct wire transfers will be provided by Bonneville's Financial Services Group and updated as necessary.

**(1) Computation of Bills**

**(a) Bonneville shall bill Capacity Owner in accordance with the annual costs rate.**

(b) Capacity Owner shall provide necessary information to Bonneville for any computation required to determine proper charges pursuant to the Agreement and shall cooperate with Bonneville in the exchange of additional information which may be reasonably useful for respective operations.

(c) Bills rendered pursuant to this Agreement shall be rounded to whole dollar amounts, by eliminating any amount which is less than 50 cents and increasing any amounts from 50 cents to 99 cents to the next higher whole dollar.

(2) Billing Month

For charges pursuant to the annual costs rate the billing month shall be the same as for the power bill rendered by Bonneville to Capacity Owner.

(3) Due Date

Charges pursuant to the annual costs rate shall be included in the power bill rendered by Bonneville to Capacity Owner and shall be due as part of the power bill when such power bill is due.

(4) Late Payment

The penalties for failure to pay a bill in full on or before close of business on the due date shall be the same as those contained in the late payment provisions in Bonneville's General Transmission Rate Schedule Provisions in effect on the date of the bill; provided, however, that no other provision of any such General Transmission Rate Schedule Provisions, including, but not limited to, provisions regarding cancellation, termination, or suspension of service, shall have application with respect to the payment of any rate or charge pursuant to the annual costs rate set forth in Exhibit B. Bonneville's right to suspend service for late payment under the Agreement shall be pursuant to paragraph 9(e)(1) of this Agreement, which right shall in no way be limited by this section.

(5) Disputed Bills

In the event of a disputed bill, full payment shall be rendered to Bonneville and the disputed amount noted. Disputed amounts are subject to the late payment provisions specified in section II(4) of the Billing Provisions of this Exhibit B. Bonneville shall separately account for the disputed amount. If it is determined that Capacity Owner is entitled to the disputed amount, Bonneville shall refund the disputed amount with interest, such interest to

be determined by Bonneville's Financial Services Group. In the event that Bonneville and Capacity Owner do not resolve such dispute, Capacity Owner shall not be prevented by this section II(5) of the Billing Provisions of this Exhibit B from initiating arbitration pursuant to and to the extent allowed by section 15 of this Agreement.

(6) Revised Bills

If Bonneville determines that it has over- or under-charged Capacity Owner due to a computational error or pursuant to an amendment to the Operating Plan in any given billing month, Bonneville may render to Capacity Owner a revised bill.

(i) If the amount of the revised bill is less than or equal to the amount of the original bill for such billing month, the revised bill shall replace the original bill issued by Bonneville. The revised bill shall have the same date as the original bill.

(ii) If the amount of the revised bill is greater than the amount of the original bill for such billing month, a new bill will be issued for the difference between the revised bill and the original bill. The date of the new bill shall be its date of issuance, and Capacity Owner shall make payment to Bonneville as specified in the Billing Provisions of this Exhibit B.

**Capacity Ownership Share, Capacity Ownership Percentage, Scheduling  
Percentage, and Scheduling Share**

Capacity Ownership  
Share = 32 MW

Capacity Ownership  
Percentage = Capacity Ownership Share ÷ Bonneville's PNW AC Intertie  
Rated Transfer Capability<sup>1</sup>

Scheduling Percentage = Capacity Ownership Share ÷ PNW AC Intertie Rated  
Transfer Capability

Scheduling Share = Scheduling Percentage × PNW AC Intertie Operational  
Transfer Capability

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<sup>1/</sup> As of the Effective Date, Bonneville's PNW AC Intertie Rated Transfer  
Capability in a north-to-south direction, calculated in accordance with the  
Northwest Intertie Agreements equals 3450 MW (total PNW AC Intertie Rated  
Transfer Capability (4800 MW) – Portland's PNW AC Intertie Rated Transfer  
Capability (950 MW) – PacifiCorp's PNW AC Intertie Rated Transfer  
Capability (400 MW)).

**Lump Sum Payment Calculation**

A. SECOND 800 MW COSTS, ESTIMATED<sup>1</sup>, ACTUAL<sup>2</sup>, AND REVISED ACTUAL<sup>3</sup>

<u>Facilities whose costs will be adjusted using change Between Estimate and Actual</u>	(\$ in Thousands)		
	(1) BPA's Costs <u>Estimated</u>	(2) BPA's Costs <u>Actual</u>	BPA's Costs <u>Revised Actual</u>
1. Alvey (Marion-Alvey Caps)	\$5,739		
2. Slatt (Loop in - Breaker)	3,044		
3. Grizzly (BPA Breakers)	11,044		
4. Loop into Slatt	656		
5. Malin-Meridian loop into Captain Jack	982		
6. Alvey Substation - BPA	8,168		
7. Dixonville - PacifiCorp	8,635		
8. Meridian - PacifiCorp	6,548		
9. Power System Control	3,575		
10. Alvey-Spencer - BPA	1,346		
11. Spencer-Dixonville - PacifiCorp	20,388		
12. Dixonville-Meridian - PacifiCorp	<u>32,140</u>		
SUBTOTAL	102,265		
<u>Facilities whose costs will be adjusted using Change Between Estimate and Actual, multiplied by 50 percent</u>			
13. Captain Jack (BPA Breakers)	\$14,335		
14. Captain Jack (Communication and Control)	5,100		
15. Captain Jack (Series Capacitors)	722		
16. Power System Control	5,596		
17. Captain Jack line to Oregon-Calif. border	<u>5,724</u>		
SUBTOTAL	\$31,477		
50 PERCENT OF SUBTOTAL	<u>15,739</u>		
TOTAL	<u>\$118,004</u>		

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1/ Based on mid-1989 program planning levels.

2/ Actual costs will be available approximately December 1995, or as soon as practicable thereafter. Supporting documentation will be provided including work orders and accounting data for each line item.

3/ For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the revised actual costs of facilities pertaining to each such calculation of the Revised Adjusted Capacity Ownership Price.

**B. INITIAL, ADJUSTED, AND REVISED ADJUSTED CAPACITY OWNERSHIP PRICE<sup>1</sup>**

	(1)	(\$ in Millions) (2)	
<u>Cost Item</u>	Initial Capacity Ownership Price	Adjusted Capacity Ownership Price	Revised Adjusted Capacity Ownership Price <sup>2</sup>
1. Second 800 MW	\$118	\$___	\$___
2. AFUDC <sup>3</sup> on Second 800 MW	+ 19	+ ___	+ ___
3. Existing Support Facilities	+ <u>19.1</u>	+ <u>19.1<sup>4</sup></u>	+ <u>19.1<sup>4</sup></u>
4. Total Cost <sup>5</sup>	\$156	\$___	\$___
5. PRICE PER KW (CO-94) <sup>6</sup>	<u>\$215</u>	\$___	\$___

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<sup>1/</sup> Initial, Adjusted, and Revised Adjusted Capacity Ownership Price are determined in accordance with the CO-94 rate in Exhibit A.

<sup>2/</sup> Bonneville may make multiple calculations of the Revised Adjusted Capacity Ownership Price pursuant to paragraph 9(a)(3). For each calculation of the Revised Adjusted Capacity Ownership Price, Bonneville will include the column pertaining to such calculation and the columns for any previous calculations of the Revised Adjusted Capacity Ownership Price.

<sup>3/</sup> AFUDC will be calculated in accordance with the CO-94 rate in Exhibit A.

<sup>4/</sup> Not adjusted in calculating the Adjusted Capacity Ownership Price or the Revised Adjusted Capacity Ownership Price.

<sup>5/</sup> Bonneville's indirect costs and overhead costs shall be included. Such indirect costs and overhead costs shall be allocated or distributed to the Third AC Intertie Project using the indirect and overhead allocation and distribution methodologies employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Third AC Intertie Project was under construction. Such allocation or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's Third AC Intertie Project than with respect to any other transmission projects under construction at the same time.

<sup>6/</sup> Price per kW is derived by dividing the Total Cost by 725 MW.

C. INITIAL LUMP SUM PAYMENT

1.	PacifiCorp's Capacity Ownership Share	=	32 MW
2.	Initial Capacity Ownership Price	X	\$215 (\$215,000/MW)
3.	Initial Lump Sum Payment <sup>1</sup>	=	\$6,880,000
4.	Deduction: Negotiation Deposit with Interest		
5.	Due to Bonneville:	=	\$6,880,000

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<sup>1/</sup> Initial Lump Sum Payment is calculated in accordance with section IV.A of the CO-94 rate in Exhibit A.

D. ADJUSTED LUMP SUM PAYMENT

1.	PacifiCorp's Capacity Ownership Share	=	32 MW
2.	Adjusted Capacity Ownership Price	X	\$
3.	Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Initial Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to PacifiCorp	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to PacifiCorp	=	

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1/ Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A.

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from the date Bonneville receives payment pursuant to paragraph 9(a)(1) through the date Bonneville or PacifiCorp receives payment pursuant to subparagraph 9(a)(2)(B).



E. REVISED ADJUSTED LUMP SUM PAYMENT

1.	PacifiCorp's Capacity Ownership Share	=	32 MW
2.	Current Revised Adjusted Capacity Ownership Price	X	\$
3.	Current Revised Adjusted Lump Sum Payment <sup>1</sup>	=	
4.	Adjusted Lump Sum Payment/immediately preceding Revised Adjusted Lump Sum Payment	-	_____
5.	SUBTOTAL due to Bonneville, or Refund Due to PacifiCorp	=	
6.	Interest <sup>2</sup>	+	
7.	Due to Bonneville, or Refund due to PacifiCorp	=	

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1/ Revised Adjusted Lump Sum Payment is calculated in accordance with the CO-94 rate in Exhibit A. Bonneville will calculate a Revised Adjusted Lump Sum Payment each time a Revised Adjusted Capacity Ownership Price is calculated pursuant to paragraph 9(a)(3).

2/ Interest will be calculated in accordance with the CO-94 rate in Exhibit A using the weighted average interest rate on Bonneville's outstanding bonds. Simple interest will be accrued from (a) the date Bonneville or PacifiCorp receives payment with respect to the Adjusted Lump Sum Payment pursuant to paragraph 9(a)(2)(B) or (b) the date Bonneville or PacifiCorp receives payment with respect to the Revised Adjusted Lump Sum Payment immediately preceding the current Revised Adjusted Lump Sum Payment through the date Bonneville or PacifiCorp receives payment with respect to the current Revised Adjusted Lump Sum Payment pursuant to subparagraph 9(a)(3)(B).

**Transmission Loss Factors**

- A. The transmission loss factor to be applied to PacifiCorp's schedules for transactions transmitted on PacifiCorp's Scheduling Share shall be 2.5 percent.
- B. The transmission loss factor to be applied to PacifiCorp's schedules for transactions transmitted pursuant to subparagraph 3(b)(1)(C) shall be 3.0 percent.

(PMLAN-MPSD-W\PM\CT\94628EXE.DOC)

**Bonneville's PNW AC Intertie**

**A. TRANSMISSION LINE FACILITIES**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <u>McNary-John Day 500 kV Line Loop into Slatt:</u>	100	100
• McNary-Slatt Str. 108/1 to substation dead end tower, 155 meters		
• Slatt-John Day Str. 1/1 to substation dead end tower, 194 meters		
2. John Day-Grizzly No. 1 500 kV	100	100
3. John Day-Grizzly No. 2 500 kV	100	100
4. Grizzly-Captain Jack No. 1 500 kV	100	100
5. Captain Jack-Malin No. 1 500 kV	100	100
6. Buckley-Grizzly 500 kV	100	57
7. Grizzly-Summer Lake 500 kV	100	57
8. 500 kV double circuit between Buckley and Marion that supports the Buckley- Marion No. 1 and the Ashe-Marion No. 2 500 kV circuits (Str. No. 1/3 to Marion, 159 km)	100	25
9. Marion-Alvey 500 kV	100	50
10. Captain Jack-COB (10 km) 500 kV	100	100
11. Alvey-Dixonville 500 kV	50	100
12. Dixonville-Meridian 500 kV	50	100

**B. SUBSTATION FACILITIES <sup>1/ 2/</sup>**

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO PNW AC INTERTIE</u>
1. <b>Slatt 500 kV</b> (Dispatch one-line diagram No. 228962)		
<u>John Day line terminal</u>		
• New Breaker D#5021	100	100
• Existing 500 kV MOD D#5020/7022	100	100
• New 500 kV MOD D#5022	100	100
• Existing 500 kV MOD D#5019	100	50
• Existing Breaker D#5018	100	50

% APPLICABLE TO  
% BPA OWNED PNW AC INTERTIE

• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>McNary line terminal</u>		
• 500 kV MOD D#5023/7847	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General		
2. <b>John Day 500 kV</b> (Dispatch one-line diagram No. 132281)		
<u>Grizzly No.2 line terminal</u>		
• Breaker D#4131	100	50
• Breaker D#4134	100	100
• MOD D#4132	100	50
• MOD D#4133/7867	100	100
• MOD D#4135	100	100
• Associated Line PTs	100	100
<u>Grizzly No.1 line terminal</u>		
• Breaker D#4140	100	50
• Breaker D#4143	100	100
• MOD D#4141	100	50
• MOD D#4142/7869	100	100
• MOD D#4144	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
Station General		
3. <b>Buckley 500 kV, Gas Insulated Substation</b> (Dispatch one-line diagram No. 232583)		
<u>Slatt No. 1 line terminal</u>		
• Breaker D#4967	100	57
• Isolating switch D#4966/7328	100	57
• Isolating switch D#4968/7355	100	57
• Ground switch D#7415	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Summer Lake No. 1 line terminal</u>		
• Breaker D#4961	100	57

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
• Isolating switch D#4960/7312	100	57
• Isolating switch D#4962/7313	100	57
• Ground switch D#7311	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Marion No. 1 line terminal</u>		
• Breaker D#4964	100	57
• Isolating switch D#4963/7314	100	57
• Isolating switch D#4965/7321	100	57
• Ground switch D#7477	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
Station General		
4. <b>Marion 500 kV</b> (Dispatch one-line diagram No. 136180)		
<u>Buckley line terminal</u>		
• Breaker D#4389	100	50
• Breaker D#4386	100	25
• MOD D#4387	100	25
• MOD D#4390	100	50
• MOD D#4388/7751	100	50
• Associated Line PTs	100	50
<u>Alvey line terminal</u>		
• Breaker D#4374	100	50
• Breaker D#4377	100	25
• MOD D#4376	100	25
• MOD D#4375/7922	100	50
• MOD D#4373	100	50
• Associated Line PTs	100	50
Station General		
5. <b>Alvey 500 kV</b> (Dispatch one-line diagram No. 121424)		
<u>Bank No. 5 terminal</u>		
• Breaker D#5081	50	100
• MOD D#5080	50	100
• MOD D#5082	50	100
• MOD D#5090	50	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
• MOD D#5089/8157	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Marion No. 1 line terminal</u>		
• Breaker D#5084	50	100
• MOD D#5083/8155	50	100
• MOD D#5085	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>Dixonville No. 1 line terminal</u>		
• Breaker D#5087	50	100
• MOD D#5086/8156	50	100
• MOD D#5088	50	100
• Associated Terminal Arresters	50	100
• Associated Line PTs	50	100
<u>500 kV Series Capacitor Bank (Marion-Alvey 500 kV line)</u>		
• MODs D#5100/8160,5101/8159, 5102/8158	50	100
• Bypass breaker D#5103	50	100
Station General		
6. <b>BPA/PacifiCorp Dixonville 500 kV Station</b> (PacifiCorp's one-line diagram PD-40020)		
<u>Note: PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299, as revised or amended.</u>		
<u>For Alvey and Meridian line terminals</u>		
• Breakers 11U1, 11U2, 11U3	50	100
• Isolating MODs 11U701, 11U700/ 11U507, 11U702, 11U703/11U505, 11U704, 11U705/11U506, 11U706, 11U707, 11U708/11U501	50	100
• Two sets of line terminal PTs	50	100
• Two sets of line terminal arresters	50	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
• Series Capacitor Bank in Alvey-Dixonville 500 kV line and associated isolating devices	50	100
• 180 MVAR Shunt Reactor Bank S664, 665, 666, 667 and associated arresters, PTs, and isolating devices	50	100
Station General		
7. <b>BPA/PacifiCorp Meridian 500 kV Yard</b> (PacifiCorp's one-line diagram PD-32976)		
<u>Note:</u> PacifiCorp will be invoicing BPA for any future replacements of these items listed consistent with Exhibit C of Bonneville-PacifiCorp Amendatory Agreement No. 2 to Contract No. DE-MS79-86BP92299.		
<u>For Dixonville line terminal</u>		
• Breakers 11R2, 11R6	50	50
• Isolating MODs 11R702, 11R703/11R501, 11R704, 11R710, 11R711	100	100
• One set of line PTs	50	100
• One set of line terminal arresters for the Dixonville line and one set for the Captain Jack line	50	100
• 180 MVAR Shunt Reactor Bank S690, 691, 692, 693 and associated arresters, PTs, and isolating devices	50	100
• Series Capacitor Bank in the Dixonville-Meridian 500 kV line and associated isolating devices.	50	100
Station General		
8. <b>Grizzly 500 kV</b> (Dispatch one-line diagram No. 103924)		
<u>John Day No. 1 line terminal</u>		
• Breaker D#4058	100	100
• Breaker D#5040	100	100
• MOD D#4059	100	100
• MOD D#4057/7848	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
• MOD D#4056	100	100
• MOD D#5039	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>John Day No. 2 line terminal</u>		
• Breaker D#4042	100	100
• Breaker D#4046	100	100
• MOD D#4043	100	100
• MOD D#4044/7845	100	100
• MOD D#4045	100	100
• MOD D#4047	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Buckley No. 1 line terminal</u>		
• Breaker D#5031	100	100
• Breaker D#5028	100	100
• MOD D#5032	100	100
• MOD D#5030/8122	100	100
• MOD D#5029	100	100
• MOD D#5027	100	100
• Associated Line PTs	100	100
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#5037	100	100
• Breaker D#5034	100	100
• MOD D#5038	100	100
• MOD D#5036/8123	100	100
• MOD D#5035	100	100
• MOD D#5033	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Summer Lake line terminal</u>		
• Breaker D#5025	100	100
• MOD D#5026/8121	100	100
• MOD D#5024	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100



	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
<u>180 MVAR Reactor Bank No. 1</u>	100	100
• Breaker D#4222	100	100
• Isolating Switch D#4060	100	100
• Associated Arresters	100	100
<u>300 MVAR Reactor Bank No. 2</u>	100	100
• Breaker D#4720	100	100
• Isolating Switch D#4719	100	100
• Associated Arresters	100	100
• 300 MVAR Reactor Bank No. 3 and Neutral Reactor	100	100
• Breaker D#4038	100	100
• Isolating Switch D#4062	100	100
• Neutral isolating switch D#4109/4081	100	100
• Associated Arresters	100	100
• Associated PTs	100	100
• North Main Bus 500 kV PTs	100	100
• South Main Bus 500 kV PTs	100	100
Station General		
9. <b>Sand Spring 500 kV Compensation Station</b> (Dispatch one- line diagram No. 142239)		
<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
Station General		
10. <b>Fort Rock 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142237)		
<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
<u>Series Cap. Bank No. 3</u> (Grizzly-Summer Lake line) and associated equipment	100	100
Station General		
11. <b>Sycan 500 kV Compensation Station</b> (Dispatch one-line diagram No. 142238)		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
<u>Series Cap. Bank No. 1</u> (Grizzly-Captain Jack line) and associated equipment	100	100
<u>Series Cap. Bank No. 3</u> (Summer Lake-Malin line) and associated equipment but <b>excluding</b> the bypass MOD D#5065 and transmission tower	65	100
Station General		
12. <b>Summer Lake 500 kV</b> (Dispatch one-line diagram No. 232667)		
<u>Grizzly line terminal</u> (formerly Buckley-Ponderosa Tap)		
• Breaker D#4959	100	57
• MOD D#4955	100	57
• MOD D#4956/7309	100	57
• Associated Terminal Arresters	100	57
• Associated Line PTs	100	57
<u>Malin line terminal</u>		
• Line protective relays	0	100
Station General		
13. <b>Malin 500 kV</b> (Dispatch one-line diagram No. 103923)		
<u>Captain Jack No. 1 line terminal</u>		
• Breaker D#4066	100	100
• Breaker D#4064	100	100
• MOD D#4068	100	100
• MOD D#4067/7849	100	100
• MOD D#4065	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain line No. 1 terminal</u>		
• Breaker D#4186	50	100
• MOD D#4063/7970	100	100
• MOD D#4185	50	100
• MOD D#4187	50	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Round Mountain line No. 2 terminal</u>		

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
• Breaker D#4582	50	100
• MOD D#4583	50	100
• MOD D#4581	50	100
• MOD D#4074/7856	75	100
<u>Grizzly No. 2/Round Mountain No. 2 line position</u>		
• Breaker D#4072	75	100
• MOD D#4073	75	100
<u>North Main Bus 500 kV PTs</u>	100	100
<u>South Main Bus 500 kV PTs</u>	50	100
<u>300 MVAR Shunt Reactor Bank No. 1 and associated arresters and isolating devices (D#4327, 4393)</u>	100	100
<u>2-239 MVAR Shunt Cap. Banks and associated isolating devices (D#4183, 4181, 4184, 4182, 8065, 8066)</u>	100	100
<u>Line protective relays for Summer Lake line</u>	0	100
Station General		
14. <b>Captain Jack 500 kV</b> (Dispatch one-line diagram No. 248548)		
<u>Series Cap. Bank No. 1</u> (Captain Jack-Olinda line)	100	100
• MODs D#4974/8101, 4973/8099, 4975/8100	100	100
• Bypass breaker D#4971, 4972		
<u>Grizzly No. 1 line terminal</u>		
• Breaker D#4990	100	100
• Breaker D#4993	100	100
• MOD D#4989	100	100
• MOD D#4991/8104	100	100
• MOD D#4992	100	100
• MOD D#4994/8105	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Malin No. 1 line terminal</u>		
• Breaker D#4996	100	100

	<u>% BPA OWNED</u>	<u>% APPLICABLE TO AC INTERTIE</u>
• MOD D#4995	100	100
• MOD D#4997	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs	100	100
<u>Olinda No. 1 line terminal</u>		
• Breaker D#4977	100	100
• Breaker D#4980	100	100
• MOD D#4976	100	100
• MOD D#4978	100	100
• MOD D#4979	100	100
• MOD D#4981	100	100
• Associated Terminal Arresters	100	100
• Associated Line PTs (2 sets)	100	100
<u>North Main Bus 500 kV PTs</u>	100	100
<u>South Main Bus 500 kV PTs</u>	100	100
Station General		
<b>15. Chief Joseph Substation (Dispatch one-</b> line diagram No. 124313)		
<u>230 kV, 1400 MW Braking Resistor</u>	100	100
Includes breaker dispatch No. A-594, a high speed vacuum switch and one 230.kV isolating switch in Bay 12		
Station General		

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1/ Station General will be allocated to each substation according to Bonneville's standard methodology.

2/ Each substation includes associated relays.

**Capacity Owners**

CAPACITY OWNER	CONTRACT NUMBER	CAPACITY OWNERSHIP SHARE (MW)	CAPACITY OWNERSHIP PERCENTAGE
PNGC	DE-MS79-94BP94523	50	1.4
Puget	DE-MS79-94BP94521	400	11.6
Seattle	DE-MS79-94BP94522	160	4.6
Snohomish	DE-MS79-94BP94525	42	1.2
Tacoma	DE-MS79-94BP94524	41	1.1
PacifiCorp	DE-MS79-95BP94628	32	0.9

PNGC: Pacific Northwest Generating Cooperative

Puget: Puget Sound Power & Light Company

Seattle: City of Seattle, City Light Department

Snohomish: Public Utility District No. 1 of Snohomish County

Tacoma: Tacoma Public Utilities

PacifiCorp: PacifiCorp Electric Operations

**Provisions Required by Statute or Executive Order**

1. Contract Work Hours and Safety Standards Act (40 U.S.C. & 327, et seq.).

(a) Overtime Requirements.

Seattle, contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation: liability for unpaid wages; liquidated damages.

In the event of any violation of the provisions set forth in section 1 of this Exhibit H, Seattle and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, Seattle and such subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in section 1 of this Agreement in the sum of \$10.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provision set forth in section 1 of this Exhibit.

(c) Withholding for unpaid wages and liquidated damages.

The person designated in writing by Bonneville's Administrator with the Authority to enter into, administer, modify, suspend or terminate this Exhibit, make related determinations and findings and bind Bonneville only to the extent of delegated authority shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by Seattle or its subcontractor, if any, under any such

contract or any other federal contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of Seattle or such subcontractor for unpaid wages and liquidated damages as provided in section 2 of this Exhibit.

2. Convict Labor (Exec. Order No. 11755, Dec. 29, 1979).

In connection with the performance or work under this Agreement, Seattle and any subcontractor, if any agrees not to employ any person undergoing sentence of imprisonment except as otherwise provided by law.

3. Equal Opportunity (Exec. Order No. 11246, Sep. 24, 1965).

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), Seattle has been or is awarded nonexempt federal contracts and/or subcontracts that have an aggregate value in excess of \$25,000.00, Seattle shall comply with sections 3(b)(1) through 3(b)(11) below. Upon request, Seattle shall provide information necessary to determine the applicability of this clause.

(b) During performance of this Agreement, Seattle agrees as follows:

(1) Seattle shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

(2) Seattle shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: (1) employment; (2) upgrading; (3) demotion; (4) transfer; (5) recruitment or recruitment advertising; (6) layoff or termination; (7) rates of pay or other forms of compensation; and (8) selection for training, including apprenticeship.

(3) Seattle shall post in conspicuous places, available to employees and applicants for employment, the notices that explain this clause, such notices to be provided by the person designated in writing by Bonneville's Administrator with the authority to enter into, administer, modify, suspend or terminate this Agreement, make related determinations and findings and bind Bonneville only to the extent of delegated authority (Contracting Officer).

(4) Seattle shall, in all solicitations or advertisements for employees placed by or on behalf of Seattle, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(5) Seattle shall send, to each labor union or representative or of workers with which it has a collective bargaining agreement or other contract or understanding, the notice provided by the Contracting Officer advising the labor union or workers' representative of Seattle's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) Seattle shall comply with Executive Order No. 11246, Sep. 24, 1965 (30 Fed. Reg. 12319), as amended, and the rules, regulations and orders of the Secretary of Labor.

(7) Seattle shall furnish to Bonneville all information required by Executive Order No. 11246, as amended, and by the rules, regulations and orders of the Secretary of Labor. *Standard Form 100 (EEO-1)*, or any successor form, is the prescribed form to be filed within 30 days following the award of this contract, unless filed within 12 months preceding the date of the award of this contract.



(8) Seattle shall permit access to its books, records and accounts by Bonneville or the Office of Federal Contract Compliance Programs (OFCCP) for purpose of investigation to ascertain Seattle's compliance with such rules, regulations and orders.

(9) If the OFCCP determines that Seattle is not in compliance with this clause or any rule, regulation or order of the Secretary of Labor, this Agreement may be canceled, terminated, or suspended in whole or in part and Seattle may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order No. 11246, as amended. In addition, sanctions may be imposed and remedies invoked against Seattle as provided in Executive Order No. 11246, as amended, the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10) Seattle shall include the terms and conditions of sections 3(b)(1) through 3(b)(11) of this Exhibit in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) Seattle shall take such action with respect to any subcontract or purchase order as may direct as means of enforcing these terms and conditions, including sanctions for noncompliance: Provided, that if Seattle becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, Seattle may request the Government to enter into the litigation to protect the interest of the United States.

(c) Notwithstanding any other clause in this Agreement, disputes relative to this clause will be governed by the procedures in 41 CFR § 66-1.1.

4. Certification of Non-segregated Facilities (48 CFR § 22.810).

(a) Seattle certifies that it does not and will not maintain or provide for employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. Seattle agrees that a breach of this certification is a violation of section 3 (the Equal Opportunities Clause) of this Exhibit.

(b) Seattle agrees that it will (1) obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; (2) retain such certifications in its files (3) forward the following notice to such proposed subcontractors, except where the proposed subcontractors have submitted identical certifications of specific time periods:

"Notice to Prospective Subcontractors of Requirement for  
Certifications of Non-segregated Facilities.

"A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. This certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually)."

5. Officials Not to Benefit (41 U.S.C. § 22).

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this Agreement or to any benefit arising from it. However, this clause does not apply to this Agreement to the extent that this Agreement is made with a corporation for the corporation's general benefit.

6. Bonneville's Obligations Not General Obligations of the United States (16 U.S.C. § 839(j)).

None of the offerings of obligations, or promotional materials for such obligations, which may be offered by Seattle to fund its activities pursuant to this Agreement, shall be construed to be, general obligations of the United States, nor are such obligations intended to be or are they secured by the full faith and credit of the United States.

7. Small Business Act (15 U.S.C. §§ 631 and 637).

(a) It is the policy of the Government that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any federal agency.

(b) Seattle hereby agrees to carry out the policy set forth in 7(a) in awarding subcontracts to the fullest extent consistent with the efficient performance of this Agreement. Seattle further agrees to cooperate on any studies or surveys as may be conducted by the United States Small Business Administration or Bonneville as may be necessary to determine the extent of Seattle's compliance with this clause.

(c) As used in this agreement the term "small business concern" shall mean a small business as defined in section 3 of Small Business Act (15 U.S.C. § 632) and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

(1) which is at least 51 percent owned by one or more socially disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

(2) whose management and daily business operations are controlled by one or more such individuals.

Seattle shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans and other minorities, or any other individual found to be disadvantaged by the United States Small Business Administration pursuant to section 8(a) of the Small Business Act.

(d) Seattle acting in good faith may rely on written representations by its subcontractor regarding its status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

8. Other Statutes, Executive Orders and Regulations.

(a) Seattle agrees to comply with the following statutes, executive orders and regulations to the extent applicable:

(1) False Claims Act, 31 U.S.C. § 3729, et seq. Whoever makes or presents to any person or officer in the civil military or naval service of the United States, or to any department or agency thereof, any claim upon or against the United States, or any department or agency thereof, knowing such claim to be false, fictitious or fraudulent, shall be fined not more than \$10,000.00 or imprisoned not more than 5 years, or both;

(2) Rehabilitation Act of 1973, 29 U.S.C. §793, as amended, Executive Order No. 11758, Jan. 15, 1974, and the regulations of the Secretary of Labor, 41 CFR Part 60-250, et seq., which concern affirmative action for handicapped workers;

(3) Vietnam Era Veterans Readjustment Assistance Act of 1972, 38 U.S.C. §§ 101, 102, 240, 241, 1502, 1504, 1507, as amended, and the clauses contained in 41 CFR Part 60-250, et seq., which concern affirmative action for disabled veterans and veterans of the Vietnam Era;

(4) Executive Order No. 11625, Oct. 13, 1971, and implementing regulations which concern utilization of small disadvantaged business concerns;

(5) Anti-Kickback Act, 41 U.S.C. § 51, et seq.; and

(6) Privacy Act of 1974, 5 U.S.C. § 552a.

(b) Seattle agrees to comply with requirements deemed necessary by Bonneville in order to implement Bonneville's obligations under the National Historic Preservation Act of 1966, U.S.C. §§ 470, et seq.

### **Bonneville's PNW AC Intertie Costs**

All costs in sections I through VIII of this Exhibit I shall be subject to the following provisions:

#### **PURPOSE**

Bonneville shall determine and calculate Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, Power Scheduling Costs, and End of Term Costs with respect to Bonneville's PNW AC Intertie in accordance with this Exhibit I. None of Operations Costs, Maintenance Costs, Replacement Costs and Reinforcement Costs, General Plant Costs, Other Costs, Contracts and Rates Costs, and End of Term Costs (each of the foregoing for purposes of this sentence, a Cost) shall include any other Cost.

#### **SOURCE OF INFORMATION AND COSTS**

Bonneville shall forecast in accordance with this Exhibit I the costs reflected in any Operating Plan pursuant to Schedules A through H of this Exhibit using the most detailed information available to Bonneville from its budget process at the time the forecast is made. Bonneville shall determine the actual costs reflected in any Operating Plan pursuant to Schedules A through H, using Bonneville's then existing accounting system in accordance with this Exhibit I. All costs reflected in Schedules A through H shall be net of credit.

Bonneville shall determine its overall overhead and overall indirect costs. A portion of Bonneville's overall overhead and indirect costs shall be allocated to such total system operations costs (pursuant to section I below), total system maintenance costs (pursuant to section II below), total capital costs (pursuant to sections III and IV below), Other Costs (pursuant to section V below), Contracts and Rates Costs (pursuant to section VI below), Power Scheduling Costs (pursuant to section VII below), and End of Term Costs (pursuant to section VIII below) using Bonneville's

normal allocation or distribution methodologies for such costs, as such methodologies may be changed by Bonneville from time to time. Such allocations or distribution methodologies shall not be required to meet any stricter standard of benefit to Bonneville's PNW AC Intertie than with respect to other transmission facilities.

Bonneville shall record its costs into its accounting systems in accordance with generally accepted accounting principles. For purposes of this Agreement, "generally accepted accounting principles" means the common set of accounting concepts, standards, and procedures that are adopted by entities (such as the utility industry) for purposes of financial statement disclosure.

Whenever Bonneville alters its accounting system or methods to permit costs referred to in this Exhibit I, which were previously allocated to functions and activities, to be directly assigned to function and activities, then in that event PacifiCorp and Bonneville shall, in concert with the Capacity Owners other than PacifiCorp, in good faith negotiate revisions to this Exhibit I to include such directly assigned costs.

## **COSTS**

### **I. Operations Costs**

#### **A. Operations Costs - Allocation Factor**

The allocation factor (Schedule A, line 3) used to determine the Allocated Direct Cost of Operations Cost, Indirect Cost of Operations Cost, and Overhead Cost of Operations Cost is the ratio of major facility units (MFUs) of Bonneville's PNW AC Intertie operated by Bonneville to MFUs of the Federal Columbia River Transmission System.

An MFU (Schedule A, lines 1 and 2) is any of the following major pieces of power system equipment which, at any given time, is installed on and is a part of the Federal Columbia River Transmission System: substation switchgear (such as power circuit breakers; potential devices; disconnects, load interrupters, hot-stick operated bus links; switching devices, circuit switchers, ground switches; and switchyard equipment terminals); protective

equipment (such as grounding devices; reactors; arrestors and resistors; voltage regulators; engine generators and motor generators; and high voltage fuses); transformation equipment (such as power transformers; diesel generators; grounding transformers; regulators and shunt reactors; synchronous condensers; and shunt or series capacitors); station equipment (such as switchyard lighting, batteries and chargers, air compressors, station service equipment, and lightening arrestors); instruments, control, and supervisory equipment (such as switchboards, instruments, and control panels; relay panels, transfer trip, and single-pole relaying; and oscillographs; fault detectors and locators; sequential events recorders, supervisory control, and data acquisition equipment; and indicating meters, instruments, and loggers); and equipment specific to direct current and static var compensator stations (such as mercury arc valves; thyristor systems; air handling packages; water control packages; harmonic filtering systems; motor control centers, such as fans, pumps, and dampening resistors; and valve damping resistors); or devices that perform similar types of functions.

Once each fiscal year, Bonneville shall count the number of MFUs on Bonneville's PNW AC Intertie (exclusive of facilities operated by others) (Schedule A, line 1) and the number of MFUs on the Federal Columbia River Transmission System (Schedule A, line 2). In calculating the forecast Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs, Bonneville shall use the most recent MFU count available at the time of such calculation in developing its initial Operating Plan for a given fiscal year. For each Operating Plan which is for the same fiscal year, Bonneville shall use the same MFU count in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**B. Operations Costs - Operations Functionalization Factor**

For each Operating Plan, Bonneville's total system operations direct cost, indirect cost and overhead cost (Schedule A, lines 7, 9, and 11) shall be adjusted by an operations functionalization factor (Schedule A, line 6) so that



Capacity Owners pay only transmission-related system operations costs. The operations functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using the costs developed for the last year of the rate period for which Bonneville has developed rates, the operations functionalization factor shall be the ratio of (a) Bonneville's total system operations cost functionalized to transmission (Schedule A, line 4) over (b) Bonneville's total system operations cost (Schedule A, line 5). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Allocated Direct Cost, Indirect Cost, and Overhead Cost components of Operations Costs.

**C. Operations Costs - Allocated Direct Costs**

For each Operating Plan, Bonneville shall allocate its total system operations direct costs as set forth in Schedule A, lines 7 and 8, to determine Allocated Direct Costs of Operations Cost (Schedule A, line 8).

Schedule A, line 7, shall reflect Bonneville's total system operations direct costs for a fiscal year. Bonneville's total system operations direct costs for a fiscal year shall include all system operations expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: substation operations (which provides for, among other things, making equipment adjustments to maintain loads and voltages within acceptable limits, switching to deenergize lines and equipment during maintenance outages, isolating damaged equipment, restoring service to customers, visually inspecting equipment, and reading meters that record line and equipment loading and voltages), power system control and dispatching (which provides for, among other things, central dispatching, control, and monitoring of the electric operation

of the Federal transmission system; load, frequency, and voltage control of Federal generating plants; the operating of the system control and data computers at the Dittmer and Eastern Control Centers; and modification and maintenance of the operation-related computers), and operations standards and engineering (which provides for, among other things, analyzing system loads, voltage levels, outage information, stability levels, and other data; making policy recommendations for system operations; planning operations' practices, restoration plans and disturbance ports; development of control center requirements for centralized automation of substations and generation; and Bonneville's participation with other utilities in developing utility operating standards and guides); and other system operations activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 8, shall reflect Allocated Direct Cost of Operations Cost.

**D. Operations Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system operations indirect costs as set forth in Schedule A, lines 9 and 10, to determine Indirect Costs of Operations Costs.

Schedule A, line 9, shall reflect Bonneville's total system operations indirect costs for a fiscal year. Bonneville's total system operations indirect costs for a fiscal year shall include all system operations indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities: general supervision and management, office support, planning, budgeting, training, direction of facilities' operation, and other system operations activities undertaken by Bonneville that are

consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule A, line 10, shall reflect Indirect Cost of Operations Cost.

**E. Operations Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system operations overhead costs as set forth in Schedule A, lines 11 and 12, to determine Overhead Costs of Operations Costs.

Schedule A, line 11, shall reflect Bonneville's total system operations overhead costs for a fiscal year. Bonneville's total system operations overhead costs for a fiscal year shall include all system operations overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system operations overhead activities undertaken by Bonneville that are consistent with system operations activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule A, line 12, shall reflect Overhead Cost of Operations Cost.

Schedule A, line 13, shall reflect Operations Cost.

## II. Maintenance Costs

### A. **Maintenance Costs - Power System Control Maintenance Functionalization Factor**

For each Operating Plan, the Power System Control (PSC) maintenance cost (Schedule B, line 4) shall be adjusted by a PSC maintenance functionalization factor (Schedule B, line 3). PSC maintenance is the testing, repair, and engineering support for Bonneville's communications and control systems. The PSC maintenance functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs for the last year of the rate period for which Bonneville has developed rates, the PSC functionalization factor shall be the ratio of (a) Bonneville's total PSC maintenance cost functionalized to transmission from such general rate case (Schedule B, line 1) over (b) Bonneville's total PSC maintenance cost from such general rate case (Schedule B, line 2).

### B. **Maintenance Costs - Direct Costs**

The Direct Costs of Maintenance Costs for a fiscal year (Schedule B, line 7) shall be Bonneville's direct costs of maintaining Bonneville's PNW AC Intertie and shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of any of the following activities for maintenance of Bonneville's PNW AC Intertie: transmission line maintenance; substation maintenance; power system control

maintenance; nonelectric plant maintenance; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of Bonneville's PNW AC Intertie undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

With the exception of PSC maintenance costs, Bonneville shall specifically identify the direct costs of maintaining Bonneville's PNW AC Intertie (Schedule B, line 7). To determine PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6), the total PSC direct maintenance cost (Schedule B, line 4) shall be multiplied by (a) the PSC maintenance functionalization factor (Schedule B, line 3) and (b) the MFU allocation factor (Schedule B, line 5) set forth in Schedule A, line 3. The Direct Costs of Maintenance Costs (Schedule B, line 8) shall be the sum of (a) PSC direct maintenance cost for Bonneville's PNW AC Intertie (Schedule B, line 6) and (b) the direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost (Schedule B, line 7).

**C. Maintenance Costs - Allocation Factor**

The allocation factor (Schedule B, line 10) used to determine Indirect Cost of Maintenance Cost and Overhead Cost of Maintenance Cost shall be the ratio of the Direct Cost of Maintenance Cost (Schedule B, line 8) to Bonneville's total system maintenance direct cost (Schedule B, line 9), as described below.

Schedule B, line 9, shall reflect Bonneville's total system maintenance direct costs for a fiscal year. Bonneville's total system maintenance direct costs for a fiscal year shall include all maintenance expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred

by Bonneville in connection with the performance of any of the following activities: transmission line maintenance; substation maintenance; power system control maintenance; nonelectric plant maintenance; establishing, monitoring, and updating system maintenance standards, policies, and procedures; pollution control and abatement; and other system maintenance activities related to preventive and corrective maintenance of the Federal Columbia River Transmission System undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 10, shall reflect the percentage which shall be used to allocate Bonneville's total system maintenance indirect cost and total system maintenance overhead cost to Bonneville's PNW AC Intertie.

**D. Maintenance Costs - Indirect Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance indirect costs as set forth in Schedule B, lines 11 and 12, to determine Indirect Costs of Maintenance Costs.

Schedule B, line 11, shall reflect Bonneville's total system maintenance indirect costs for a fiscal year. Bonneville's total system maintenance indirect costs for a fiscal year shall include all system maintenance indirect expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance any of the following activities: supervision and management, office support, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other system maintenance activities

undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule B, line 12, shall reflect Indirect Cost of Maintenance Cost.

**E. Maintenance Costs - Overhead Costs**

For each Operating Plan, Bonneville shall allocate its total system maintenance overhead costs as set forth in Schedule B, lines 13 and 14, to determine Overhead Costs of Maintenance Costs.

Schedule B, line 13, shall reflect Bonneville's total system maintenance overhead costs for a fiscal year. Bonneville's total system maintenance overhead costs for a fiscal year shall include all system maintenance overhead expenses for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other expenses, each of which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services; area offices; operations, maintenance, and construction; and engineering); and (c) other system maintenance overhead activities undertaken by Bonneville that are consistent with system maintenance activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

Schedule B, line 14, shall reflect Overhead Cost of Maintenance Cost.

Schedule B, line 15, shall reflect Maintenance Cost.

**III. Replacement Costs and Reinforcement Costs**

**A. Replacement Costs and Reinforcement Costs - Direct Costs**

The Direct Costs for Replacements and Reinforcements for a fiscal year (Schedule C, line 1) shall be Bonneville's direct capital costs for Replacements and Reinforcements for such fiscal year and shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, land, materials and equipment, spare parts, administration of spare parts, transportation of spare parts, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of the following activities: planning, environmental analyses and mitigation, survey, design, land, materials and equipment, turnkey contracts, contract construction, force account construction, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council. The Direct Costs for any Replacement or Reinforcement for a fiscal year shall also include the costs of removal and any salvage credits with respect to any PNW AC Intertie facility removed on account of such Replacement or Reinforcement.

**B. Replacement Costs and Reinforcement Costs - Indirect Costs and Overhead Costs**

For each Replacement and Reinforcement project, the Indirect Costs and Overhead Costs for Replacements and Reinforcements (Schedule C, line 2) shall be allocated or distributed to such Replacements and Reinforcements using the indirect and overhead allocation and distribution methodologies



employed by Bonneville to allocate and distribute indirect and overhead costs to all of Bonneville's other capital projects during the time the Replacements and Reinforcements are under construction. Schedule C, line 2, shall reflect the Indirect Costs and Overhead Costs of Replacements and Reinforcements.

Indirect Costs of Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel expenses, service contracts, consulting contracts, administration of materials, tools, tools procurement and administration, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: supervision, technical analyses, engineering studies, program analyses, planning, budgeting, training, and other reinforcement and replacement activities undertaken by Bonneville that are consistent with reinforcement and replacement activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Overhead Costs for Replacements and Reinforcements shall include all costs for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, and other costs, each of which being which being incurred by Bonneville in connection with any of the following activities and services of Bonneville: (a) support services (including services with respect to mainframe computers, microcomputers, laboratories, building management, materials and procurement, Electric Power Research Institute, fixed-wing aircraft, helicopter, tools, and work equipment); (b) general and administrative activities (including general and administrative activities with respect to the office of the Administrator, the Washington DC office, and the offices of: contracts and property management; fish and wildlife; equal employment opportunity; information resources; environment; internal audit; external affairs; general counsel; quality improvement; planning council liaison; financial management; power sales; energy resources; management services;

area offices; operations, maintenance, and construction; and engineering); and (c) other replacement and reinforcement activities undertaken by Bonneville that are consistent with replacement and reinforcement activities similar to the above-listed activities undertaken by utilities in the Western System Coordinating Council.

**C. Replacement Costs and Reinforcement Costs - Allowance for Funds Used During Construction (AFUDC)**

Schedule C, line 3, shall reflect AFUDC for Replacements and Reinforcements. At the beginning of each fiscal year, Bonneville shall calculate the AFUDC rate for such fiscal year. Bonneville shall apply such AFUDC rate monthly to the costs in accounts for construction work in progress for Replacements and Reinforcements.

**D. Replacement Costs and Reinforcement Costs - Interest**

Schedule C, line 4, shall reflect the interest cost payable by PacifiCorp pursuant to this Agreement with respect to any Replacement or Reinforcement. Such interest cost for any Replacement or any Reinforcement shall be simple interest calculated at a rate equal to the weighted average interest rate on Bonneville's then outstanding bonds or other debt instruments and such interest shall accrue from the date Bonneville stops accruing AFUDC (approximately the date the work order for such Replacement or such Reinforcement is closed) with respect to such Replacement or such Reinforcement to the due date of the monthly power bill containing the charge for such Replacement or such Reinforcement.

**IV. General Plant Costs**

For each Operating Plan, Bonneville shall adjust, amortize, and allocate Bonneville's total general plant investment (as described below) and Bonneville's Dittmer control equipment investment as set forth in Schedule D, lines 1 through 11, to determine General Plant Cost.

Effective on the effective date of Exhibit B

Schedule D, line 1, shall reflect for a fiscal year Bonneville's total cumulative general plant investment. Bonneville's total general plant investment shall include Bonneville's investments in any of the following: land-general plant, structures/improvements-general plant, office furniture and equipment, transportation equipment, stores equipment, tools/shop/garage equipment, laboratory equipment, power operated equipment, communication equipment, miscellaneous equipment (including equipment or apparatus used in Bonneville's utility operations which are not includable in any other general plant investment category), and other similar investment made by Bonneville that is consistent with general plant investment made by utilities in the Western Systems Coordinating Council.

Schedule D, line 2, shall reflect for a fiscal year Bonneville's cumulative investment in Dittmer control equipment.

Schedule D, line 3, shall reflect Bonneville's total general plant investment and Bonneville's Dittmer control equipment investment functionalized to generation using the methodology for functionalizing general plant as set forth in Bonneville's general rate case most recently approved by FERC on an interim basis.

Schedule D, line 4, shall reflect any general plant investment recovered from all Capacity Owners under the CO-94 rate as such general plant investment is unitized by Bonneville; provided, however, for the first two Operating Plans Bonneville shall estimate the amount of the general plant investment included in the Initial Capacity Ownership Price, which estimate shall be reflected in Schedule D, line 4, and Bonneville shall modify such Operating Plans by December 1995, or as soon as practicable thereafter, to reflect in Schedule D, line 4, the actual general plant investment included in the Adjusted Capacity Ownership Price.

Schedule D, line 5, shall reflect any general plant investment recovered from Capacity Owners pursuant to section 5 for Upgrades. The agreements

referred to in subsection 5(d) and subparagraph 5(e)(3)(B) shall specify the portion of costs of an Upgrade that will be considered general plant investment.

Schedule D, line 6, shall reflect Bonneville's adjusted general plant investment functionalized to transmission and shall be calculated by adding line 1 and line 2, and from the sum of line 1 and line 2 subtracting line 3, line 4, and line 5.

Schedule D, line 7, shall reflect Bonneville's annual cost of Bonneville's adjusted general plant investment functionalized to transmission (Schedule D, line 6). Such annual cost shall be the sum of the annual interest and amortization amounts for each category of adjusted general plant investment. The annual interest and amortization amounts for each category shall be calculated by using the investment amounts for each such category, the weighted average interest rate for all Bonneville then outstanding bonds, and the average service lives for each such category from Bonneville's most recent depreciation study. If Bonneville changes its practice of financing general plant investment with bonds, the interest rate used in the calculation referred to in the immediately preceding sentence shall reflect the weighted average interest rate for all of Bonneville's then outstanding debt instruments.

Schedule D, line 8, shall reflect for a fiscal year Bonneville's total cumulative transmission plant-in-service investment (not including general plant investment). Bonneville's total transmission plant-in-service investment shall include Bonneville's investment in any of the following items reflected as total transmission plant-in-service (not including general plant investment) in the Segmentation Study (from Bonneville's general rate case most recently approved by FERC on an interim basis: land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant

investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

Schedule D, line 9, shall be the annual cost ratio of Bonneville's PNW AC Intertie transmission-related general plant derived by dividing Schedule D, line 7, by Schedule D, line 8.

Schedule D, line 10, shall reflect Bonneville's PNW AC Intertie investment. Bonneville's PNW AC Intertie investment shall include Bonneville's investment in any of the following items reflected as Bonneville's PNW AC Intertie plant-in-service in the Segmentation Study from Bonneville's general rate case most recently approved by FERC on an interim basis (or the successor to the Segmentation Study, as determined by Bonneville): land and land rights-transmission plant, structures/improvements-transmission plant, station equipment, towers and fixtures, poles and fixtures, overhead conductor, underground conductor, roads and trails, and other transmission plant investment made by Bonneville that is consistent with transmission plant investments made by utilities in the Western Systems Coordinating Council.

**V. Other Costs**

For each Operating Plan, Bonneville shall include Other Costs associated with Bonneville's PNW AC Intertie for a fiscal year. Such Other Costs (Schedule E, line 3) for a fiscal year shall include for such fiscal year any of the following: (1) the costs of operation; maintenance; capital replacements, reinforcements, additions, betterments, renewals; or related costs which Bonneville is obligated to pay pursuant to the Northwest Intertie Agreements or other contracts referred to in subsection 8(b) of this Agreement; and (2) costs paid by Bonneville including monetary judgments, settlements, binding awards, non-contract penalties, contract penalties, liquidated damages, or forfeiture costs, and Bonneville's costs related to such monetary judgments, settlements, binding awards, non-contract penalties, contract penalties,

liquidated damages, or forfeiture costs assessed against or incurred by Bonneville as a facilities owner of, or the operator of, the PNW AC Intertie; provided, however, that PacifiCorp shall not be obligated to pay a share of any such costs that are not properly allocated to Bonneville's PNW AC Intertie.

Bonneville shall forecast its share of operations, maintenance, capital, and related costs for activities that PacifiCorp performs on Bonneville/PacifiCorp jointly-owned PNW AC Intertie facilities based on forecasts received from PacifiCorp or on actual costs for the most recent 12 consecutive month period prior to preparation of an Operating Plan.

**VI. Contracts and Rates Costs**

**A. Contracts and Rates Costs - Functionalization Factor**

For each Operating Plan, Bonneville's total contracts and rates direct costs, indirect costs, and overhead costs (Schedule F, lines 5, 6, and 7) shall be adjusted by a contracts and rates functionalization factor (Schedule F, line 3). The contracts and rates functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the contracts and rates functionalization factor shall be the ratio of (a) Bonneville's total transmission-related contracts and rates cost (Schedule F, line 1) over (b) Bonneville's total contracts and rates cost (Schedule F, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Contracts and Rates Cost.

**B. Contracts and Rates Costs - Allocation Factor**

The allocation factor (Schedule F, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Contracts and Rates Costs - Total Contracts and Rates Costs**

Bonneville's total contracts and rates costs for a fiscal year (Schedule F, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: rate filings with FERC, development of rates customers pay Bonneville for electric power and for wheeling their own power on Bonneville's transmission system; negotiation, administration, and coordination of contracts for power sales, power exchanges, conservation, wheeling and resource services; and analyzing, processing, and issuing all customer power bills; and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule F, line 9, shall reflect Contracts and Rates Cost.

**VII. Power Scheduling Costs**

For each Operating Plan, Bonneville's total power scheduling direct costs, indirect costs, and overhead costs (Schedule G, lines 5, 6, and 7) shall be adjusted by a power scheduling functionalization factor (Schedule G, line 3). The power scheduling functionalization factor shall be based on a ratio of costs from Bonneville's general rate case most recently approved by FERC on an interim basis. Using costs developed for the last year of the rate period for which Bonneville has developed rates, the power scheduling functionalization factor shall be the ratio of (a) Bonneville's total transmission-related power scheduling cost (Schedule G, line 1) over (b) Bonneville's total power scheduling cost (Schedule G, line 2). For each Operating Plan, Bonneville shall use the same functionalization factor in calculating the forecast and actual Power Scheduling Cost.

**B. Power Scheduling Costs - Allocation Factor**

The allocation factor (Schedule G, line 4) shall be the allocation factor established in Schedule A, line 3.

**C. Power Scheduling Costs - Total Power Scheduling Costs**

Bonneville's total power scheduling costs for a fiscal year (Schedule G, line 8) shall include Bonneville's expenses (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, tools, and direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other expenses, each of which being incurred by Bonneville in connection with the performance of the following activities: scheduling and marketing power to Bonneville customers and interconnected utilities, forecasting the hourly power requirements of Bonneville customers and the interchange of power with the region's interconnected electric utilities and with utilities outside the region, scheduling power to be generated at each Federal plant, weather and streamflow forecasting, controlling the reservoirs, implementing the inertia access policy, coordinating power production with the multi-purpose operation of the Federal power system, seasonal load/resource planning, developing current short-term operating plans, short-term marketing of Bonneville's surplus firm power, exchanges, and nonfirm energy, and other activities undertaken by Bonneville that are consistent with activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

Schedule G, line 9, shall reflect Power Scheduling Cost.

**VIII. End of Term Costs**



When all facilities of the PNW AC Intertie are determined, in accordance with Northwest Intertie Agreements, to be no longer operable, Bonneville shall include a forecast of all Bonneville's costs associated with decommissioning the PNW AC Intertie and credits resulting from such decommissioning in the Operating Plan for each fiscal year that such End of Term Costs are to be incurred. Bonneville's End of Term Costs for a fiscal year (Schedule H, line 4) shall include Bonneville's costs (including direct, indirect, and overhead costs) for such fiscal year for any of the following: salaries, wages, employee benefits, overtime pay, travel, service contracts, consulting contracts, materials, spare parts, transportation of spare parts, tools, direct support services (including equipment use activities, general shops activities, and heavy mobile equipment maintenance), and other costs, each of which being incurred by Bonneville in connection with the performance of any of the following activities: decommissioning, razing structures, disposal of debris, site restoration, meeting all requirements of Federal, state, or local applicable law relating to the foregoing activities, and other decommissioning activities undertaken by Bonneville that are consistent with decommissioning activities similar to the above-listed activities undertaken by utilities in the Western Systems Coordinating Council.

**Schedule A for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>I. Operations Costs</b>				
<b>A. Allocation Factor</b>				
MFUs of Bonneville's PNW AC Intertie	1		_____	
MFUs of the FCRTS	2		_____	
Allocation factor [Line 1/Line 2]	3		_____	
<b>B. Operations Functionalization Factor</b>				
Bonneville's total transmission-related systems operations cost from rate case	4		_____	
Bonneville's total system operations cost from rate case	5		_____	
Operations functionalization factor [Line 4/Line 5]	6		_____	
<b>C. Allocated Direct Cost</b>				
Bonneville's total system operations direct cost	7	_____	_____	_____
Allocated Direct Cost of Operations Cost [Line 3 * Line 6 * Line 7]	8	_____	_____	_____

	Line No.	Forecast	Actual	Difference
<b>D. Indirect Cost</b>				
Bonneville's total system operations indirect cost	9	_____	_____	_____
Indirect Cost of Operations Cost (Line 3 * Line 6 * Line 9)	10	_____	_____	_____
<b>E. Overhead Cost</b>				
Bonneville's total system operations overhead cost	11	_____	_____	_____
Overhead Cost of Operations Cost (Line 3 * Line 6 * Line 11)	12	_____	_____	_____
<b>F. Operations Cost</b> (Lines 8 + 10 + 12)	13	_____	_____	_____

**Schedule B for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>II. Maintenance Cost</b>				
<b>A. Power System Control (PSC)</b>				
<b>Maintenance Functionalization Factor</b>				
Bonneville's transmission-related PSC maintenance cost from rate case	1		_____	
Bonneville's total PSC maintenance cost from rate case	2		_____	
PSC maintenance functionalization factor (Line 1/Line 2)	3		_____	
<b>B. Direct Cost</b>				
Total PSC direct maintenance cost	4	_____	_____	_____
MFU Allocation Factor [Schedule A, line 3]	5		_____	
PSC direct maintenance cost for Bonneville's PNW AC Intertie [Line 4 * Line 3 * Line 5]	6	_____	_____	_____
Bonneville's direct cost of maintaining Bonneville's PNW AC Intertie excluding PSC maintenance cost	7	_____	_____	_____
Direct Cost of Maintenance Cost [Line 6 + Line 7]	8	_____	_____	_____

**C. Allocation Factor**

Bonneville's total system maintenance direct cost 9 \_\_\_\_\_

Allocation factor for Indirect Cost and Overhead Cost (Line 8/Line 9) 10 \_\_\_\_\_

**D. Indirect Cost**

Bonneville's total system maintenance indirect cost 11 \_\_\_\_\_

Indirect Cost of Maintenance Cost (Line 11 \* Line 10) 12 \_\_\_\_\_

**E. Overhead Cost**

Bonneville's total system maintenance overhead cost 13 \_\_\_\_\_

Overhead Cost of Maintenance Cost (Line 13 \* Line 10) 14 \_\_\_\_\_

**F. Maintenance Cost**

(Lines 8 + 12 + 14) 15 \_\_\_\_\_

**Schedule C**

	Line No.	Forecast	Actual	Difference
<b>III. Replacement Costs and Reinforcement Costs</b>				
<b>A. Direct Cost</b>				
Direct Costs of Replacements and Reinforcements	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of Replacements and Reinforcements	2	_____	_____	_____
<b>C. AFUDC</b>				
AFUDC of Replacements and Reinforcements	3	_____	_____	_____
<b>D. Interest</b>				
Interest Cost of Replacements and Reinforcements	4		_____	
<b>E. Total Replacement Costs and Reinforcement Costs</b> (Lines 1 + 2 + 3 + 4)	5	_____	_____	_____

**Notes:**

A separate Schedule C will be provided in the Operating Plan for each Replacement and Reinforcement.  
 Forecasts of Replacement Costs and Reinforcement Costs will be provided; Capacity Owners shall be billed for Replacements and Reinforcements using actual cost pursuant to section 9(b)(2)(B).

**Schedule D for FY XXXX**

	Line No.	Allocated Actual
<b>IV. General Plant Cost</b>		
Bonneville's total general plant investment	1	_____
Bonneville's Dittmer control equipment investment	2	_____
General plant investment of lines 1 and 2 functionalized to generation	3	_____
General plant investment recovered from all Capacity Owners in Adjusted Capacity Ownership Price and Revised Adjusted Capacity Ownership Price	4	_____
General plant investment recovered from Capacity Owners for Upgrades	5	_____
Adjusted general plant investment functionalized to transmission (Line 1 + Line 2 - Line 3 - Line 4 - Line 5)	6	_____
BPA total annual cost of Line 6 general plant investment	7	_____
BPA total transmission plant-in-service investment (not including general plant investment) from Segmentation Study	8	_____
ACR for Bonneville's PNW AC Intertie (Line 7/Line 8)	9	_____
Bonneville's PNW AC Intertie investment from Segmentation Study	10	_____
<b>General Plant Cost</b> (Line 9 * Line 10)	11	_____

**Schedule E for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>V. Other Costs</b>				
<b>A. PacifiCorp and related costs</b>	1	_____	_____	_____
<b>B. Other PNW AC Intertie costs</b>	2	_____	_____	_____
<b>C. Total Other Costs</b>	3	_____	_____	_____



**Schedule F for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VI. Contracts and Rates Costs</b>				
<b>A. Contracts and Rates Functionalization Factor</b>				
Transmission-related contracts and rates cost from rate case	1		_____	
Total contracts and rates cost from rate case	2		_____	
Contracts and rates cost functionalization factor [Line 1/Line 2]	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor [Schedule A, line 3]	4		_____	
<b>C. Total Contracts and Rates Costs</b>				
Contracts and rates direct costs	5	_____	_____	_____
Contracts and rates indirect costs	6	_____	_____	_____
Contracts and rates overhead costs	7	_____	_____	_____
Bonneville's total contracts and rates costs [Line 5 + Line 6 + Line 7]	8	_____	_____	_____
D. Contracts and Rates Cost [Line 8 * Line 3 * Line 4]	9	_____	_____	_____

**Schedule G for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VII. Power Scheduling Costs</b>				
<b>A. Power Scheduling Functionalization Factor</b>				
Transmission-related power scheduling costs from rate case	1		_____	
Total power scheduling cost from rate case	2		_____	
Power scheduling cost functionalization factor [Line 1/Line 2]	3		_____	
<b>B. Allocation Factor</b>				
MFU allocation factor [Schedule A, line 3]	4		_____	
<b>C. Total Power Scheduling Costs</b>				

**Schedule H for FY XXXX**

	Line No.	Forecast	Actual	Difference
<b>VIII. End of Term Costs</b>				
<b>A. Direct Cost</b>				
Direct Cost of End of Term Costs	1	_____	_____	_____
<b>B. Indirect Costs and Overhead Costs</b>				
Indirect Costs and Overhead Costs of End of Term Costs	2	_____	_____	_____
<b>C. Credits</b>				
Credits from decommissioning PNW AC Intertie facilities	3	( _____ )	( _____ )	( _____ )
<b>D. End of Term Costs</b>	4	_____	_____	_____

**PacifiCorp's Initial Transaction with California Utility**

Name of parties:

Term of Contract:

Date of Execution:

Amount of Transaction (MW):

(PMLAN-MPSD-WAPMTACT94628EXJ.DOC)

# Non-Federal Participation Capacity Ownership Contracts and Section 9(c) Policy

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## Record of Decision

**NON-FEDERAL PARTICIPATION  
CAPACITY OWNERSHIP CONTRACTS AND SECTION 9(c) POLICY**

**RECORD OF DECISION**

BONNEVILLE POWER ADMINISTRATION

U.S. DEPARTMENT OF ENERGY

July 1994

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U S BONNEVILLE POWER ADMIN  
NON-FEDERAL PARTICIPATION  
CAPACITY OWNERSHIP  
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**NON-FEDERAL PARTICIPATION**  
**CAPACITY OWNERSHIP CONTRACTS AND SECTION 9(C) POLICY**

**RECORD OF DECISION**

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## SUMMARY

On March 25, 1994, the BPA Administrator's Record of Decision (ROD) on Non-Federal Participation Capacity Ownership was signed. Such ROD documented the decision to proceed with 725 MW of Capacity Ownership in the PNW-PSW AC Intertie for non-Federal parties, and specifically discussed (1) the background of the PNW-PSW AC Intertie and BPA's access policies and proposals; (2) the general features of the Capacity Ownership proposal and its supporting NFP EIS analysis; (3) PNW-PSW AC Intertie capacity allocations between BPA and non-Federal parties; and (4) BPA's Protected Area provisions and how they would be applied to Capacity Ownership. The Capacity Ownership decision followed extensive review and analysis by BPA, and expressions of interest by utilities and members of Congress to give full consideration to non-Federal participation in the financing and use of the Third AC Intertie expansion.

As specified in Section 1.3.3.2 of the Non-Federal Participation Capacity Ownership ROD, BPA would address the final Capacity Ownership contract terms and the Northwest Power Act Section 9(c) Policy, and how it relates to BPA's Capacity Ownership offering, in a separate ROD. Accordingly, such items are discussed herein.

## 1.0 NON-FEDERAL PARTICIPATION - CAPACITY OWNERSHIP CONTRACTS

### 1.1 Background on Capacity Ownership

Shortly after a new AC Intertie was authorized by Congress in July 1984, PNW utilities expressed interest in participating in it in some manner. On June 22, 1987, BPA received a letter from the Chairman of the US House of Representatives Committee on Energy and Commerce requesting BPA to study non-Federal utility participation in the Third AC Intertie, and urging BPA to offer some type of non-Federal participation.

BPA released its study of non-Federal participation in the Third AC Intertie in March 1988. The study described options for non-Federal participation and examined their consequences in light of various criteria, but made no recommendation whether to offer non-Federal participation or what type of non-Federal participation might be offered.

In December 1988, BPA released a proposal for non-Federal participation (1988 Proposal) wherein BPA would offer up to 725 MW of its share of the Third AC Intertie for use by PNW non-Federal scheduling utilities for scheduling rights on the PNW AC Intertie only through the year 2016. BPA also proposed to retain physical ownership of the facilities and decision making authority over the operation, maintenance, planning, and construction of the facilities. The 1988 proposal contemplated that non-Federal participants would make lump sum payments for construction and related costs upon execution of the participation contracts, rather than through annual payments over the term of the agreement.

Throughout 1989, BPA worked with PNW scheduling utilities interested in participating in the Third AC Intertie to develop a participation proposal that would meet their needs. As a result, BPA modified the portion of its 1988 Proposal relating to the pricing methodology (the 1989 Proposal).

In early 1990, interested utilities objected to the limited term proposed for scheduling rights. Instead, they expressed significant interest in scheduling rights for the life of the facilities. As a result of further review and analysis, BPA revised its 1989 Proposal to become what is now known and referred to herein as Capacity Ownership. Capacity Ownership is BPA's offer for life-of-facilities non-Federal capacity rights in BPA's share of the PNW AC Intertie capacity to be made to qualified PNW non-Federal scheduling utilities (referred to herein as New Owners).

## 1.2 Key Features of Capacity Ownership Agreements

### 1.2.1 Term

Capacity Ownership Agreements will each be effective upon the execution of the Agreement by BPA and the New Owner. (Puget Sound Power and Light and PNGC Agreements will be effective following their approval by the Federal Energy Regulatory Commission and the Rural Electrification Administration, respectively.) Each Agreement shall remain in effect so long as any of the facilities of the PNW AC Intertie are in existence and operable, unless terminated earlier by written agreement or pursuant to the terms of the Agreement.

### 1.2.2 Management and Operation

Pursuant to its Intertie Agreements with Portland General Electric Company and PacifiCorp, BPA is the operator of the PNW AC Intertie. BPA's duties relative to the PNW AC Intertie include, without limitation, (1) determining the operational transfer capability (OTC); (2) addressing emergency and maintenance outages; and (3) giving and receiving switching orders. BPA shall determine and revise as necessary, with notice to New Owners, the rated transfer capability (RTC) of the PNW AC Intertie. If during the term of the Agreement the RTC becomes less than 3450 MW, or if during the term of the Agreement there is an imminent likelihood that the RTC will become less than 3450 MW, BPA will reinforce the Federal Columbia River Transmission System to maintain the 3450 MW RTC. BPA will provide New Owners notice of maintenance outages in accordance with accepted standards for such conditions on the PNW AC Intertie.

### 1.2.3 Annual Operation & Maintenance, Capitalized Replacements

The New Owners will pay 21 percent of BPA's annual costs associated with operating and maintaining BPA's PNW AC Intertie, including the direct, indirect and overhead costs of annual operation and maintenance, general plant, replacement and reinforcement projects, contracts and rates, power scheduling and end of term and other costs (see Non-Federal Capacity Ownership Rate Proposal, Administrator's Final Record of Decision, March 1994, Section 3.5).

### 1.2.4 Remedial Actions

BPA shall notify New Owners of BPA's plan for remedial actions to support the PNW AC Intertie RTC, which includes, but is not limited to, generator dropping required to support the RTC of BPA's share of the PNW-PSW AC Intertie. BPA and each New Owner are each responsible for or will make arrangements for their pro rata shares of generator dropping or other remedial actions required to maintain such RTC.

### 1.2.5 Scheduling and Operation

Each of the New Owners will submit schedules to the Joint Intertie Scheduling Office. BPA will be the operator, and will operate the PNW AC Intertie consistent with the Northwest Intertie Agreements and Prudent Utility Practice.

### 1.2.6 Upgrades

BPA will develop any plans for upgrades consistent with its PNW-PSW AC Intertie Agreements with PacifiCorp and PGE, and in consultation with the New Owners. New Owners will have the option to participate in PNW-PSW AC Intertie capacity increases resulting from upgrades provided they pay capital and related costs and the annual costs associated with the upgrade (see Non-Federal Capacity Ownership Rate Proposal ROD dated March 25, 1994).

### 1.2.7 Wheeling To and From AC Intertie for Initial RTC

BPA will make available to New Owners network wheeling between the PNW-PSW AC Intertie and the New Owner's system in an amount equal to each New Owner's share of RTC, exclusive of upgrades. Such network wheeling will be provided for a period of up to 20 years, and is the same quality and on terms and conditions consistent with that being offered to other BPA customers similarly situated. At the end of the initial term, BPA will offer to extend wheeling of the same quality as, and on terms and conditions consistent with, that being offered at that time to other BPA customers similarly situated.

### 1.2.8 Wheeling To and From AC Intertie for Upgrade Share

To the extent that BPA has capacity in excess of its needs and obligations at the time upgraded capacity is being offered, BPA will make available, through existing or new contracts to each New Owner, network wheeling between the PNW-PSW AC Intertie and the New Owner's system in an amount equal to each New Owner's share of any amount of RTC in excess of New Owner's share of RTC prior to the upgrade. Such network wheeling would be of the same quality as, and on terms and conditions consistent with, that being offered to other BPA customers similarly situated.

### 1.2.9 Third Party Wheeling

New Owners will have the choice of one of two options with regard to third party wheeling. Under option 1, a New Owner would forego the right to use its OTC to transmit power for third parties and would allow any of its unused capacity to revert to BPA. In such case, BPA would pay the New Owner a pro rata share of all of the wheeling revenues that BPA receives (exclusive of revenues received for firm wheeling) from providing short-term transmission to other utilities on the PNW-PSW AC Intertie. New Owner's who select option 1 will retain any rights they might have to access BPA PNW-PSW AC Intertie capacity under BPA's LTIAP or its successor.

Under option 2, a New Owner may use its OTC to transmit power for third parties. Neither BPA nor the New Owner is required to make its unused OTC available to the other party. New Owners who select this alternative must waive access to BPA PNW-PSW AC Intertie capacity under BPA's LTIAP or its successor.

#### 1.2.10 Price and Payment for Capacity Ownership

See Non-Federal Capacity Ownership Rate Proposal ROD dated March 25, 1994.

#### 1.2.11 Protected Areas

New Owners will not use RTC for transmission of power from new hydroelectric projects which are constructed in Columbia River Basin Protected Areas after designation thereof by BPA in the LTIAP or its successor, unless the New Owner is required by regulatory authority to purchase the output of such project or unless BPA receives sufficient demonstration that a particular project would provide benefits to existing or planned BPA fish and wildlife investments or the Pacific Northwest Electric Power and Conservation Planning Council's Fish and Wildlife Program as described in BPA's LTIAP.

#### 1.2.12 Sale or Reassignment

The New Owner's Capacity Ownership Agreement or any interest therein shall not be transferred, sold, alienated or assigned by New Owner without BPA's prior and express written consent, such consent not to be unreasonably withheld; except that BPA consents to security assignment or other like financing arrangements and certain transfers to other New Owners and PNW non-Federal scheduling utilities.

#### 1.2.13 Points of Interconnection

New Owners will be able to schedule power at either Malin or Captain Jack substations consistent with BPA's rights under its PNW-PSW AC Intertie Agreements with PacifiCorp and PGE.

#### 1.2.14 Losses

Average losses on net schedules on the PNW AC Intertie will be calculated according to the loss factors contained in the Agreement.

#### 1.2.15 Existing Intertie Agreements

BPA will use its best efforts to maintain New Owners' rights under their Capacity Ownership Agreements by making no modification to BPA's PNW AC Intertie Agreements with PacifiCorp and PGE, and by not entering into any other agreement with respect to the ownership, operation, maintenance, or management of the PNW AC

Intertie, or by making any modification to such other agreements, that would have a substantial negative impact on New Owners' without their prior written consent. New Owners consent to BPA's modification of the PNW AC Intertie Agreements with PacifiCorp and PGE, and such other agreements entered into by BPA, with respect to the ownership, operation, maintenance, or management of the PNW AC Intertie to the extent that such modification is to enable BPA to fulfill its Capacity Ownership contract obligations.

#### 1.2.16 Prudent Utility Practice

Operations, maintenance, management, reinforcements, and upgrades of PNW-PSW AC Intertie facilities shall be consistent with Prudent Utility Practice.

#### 1.2.17 Owner's Committee

An Owner's Committee will be established to review matters relative to the operation, management, and maintenance of the PNW AC Intertie. An Operating Plan that establishes New Owners annual cost payments will be developed by BPA annually and presented to an Owner's Committee for review. If New Owners disagree with the costs in BPA's proposal, New Owners may take individual cost items in the Operating Plan to arbitration.

#### 1.2.18 Audit Rights

The Owner's Committee will have the right to perform audits of BPA's books, records, and documents that directly pertain to (1) determination of or billing or refund for the Capacity Ownership price; and (2) determination of any charges billed to New Owner for Annual Charges, Upgrade Charges, or End of Term Charges.

#### 1.2.19 Arbitration

The Capacity Ownership Agreement provides for two types of arbitration: binding arbitration and nonbinding arbitration. The binding arbitration provision permits the New Owners to submit to binding baseball arbitration factual issues regarding most, but not all, costs contained in the Operating Plan. If the New Owners prevail in this arbitration, the sole remedy is to reduce the amount of annual costs paid by the New Owners by the difference between the cost of the New Owners' proposed alternative and the alternative proposed by BPA.

The nonbinding arbitration provision permits either BPA or the New Owners to submit to baseball arbitration disputes that cannot be arbitrated pursuant to the binding arbitration provision and any other dispute arising under the Agreement, with limited exceptions. After the arbitrators render a decision pursuant to this provision, BPA's Administrator has 90 days to accept or reject the decision. If the Administrator accepts the decision, it

becomes binding on the parties. If the Administrator elects to reject the decision, he or she must do on the basis of criteria listed in the Agreement.

## 2.0 NON-FEDERAL PARTICIPATION, NORTHWEST POWER ACT

### SECTION 9(c) POLICY

#### 2.1 Background

In 1968, the PNW-PSW AC Intertie began operation. Among other purposes, the PNW-PSW AC Intertie was constructed to provide additional markets for BPA surplus firm and nonfirm power. In addition, to the extent that there was transmission capacity in excess of Federal needs, Congress intended that utilities in the PNW and the PSW to take advantage of the seasonal diversity that exists between these regions by facilitating interregional exchanges.

In May 1988, BPA finalized its Long-Term Intertie Access Policy (LTIAP), which established various operating conditions under which both Federal and non-Federal utilities would have access to the Intertie.

BPA's Non-Federal Participation policy goal was to ensure that potential New Owners had an equitable opportunity to acquire a share of transmission capacity in the Intertie, that is as close to full "ownership" as possible.

In order to become a New Owner, a PNW utility was first required to complete a contract for the sale or exchange of a regional resource with a PSW utility. The purpose of this was to ensure that the Capacity Ownership share would be used by the New Owner.

Whenever there is an export of a regional resource, BPA is required under Public Law 96-501, the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act), Section 9(c), to make a determination of whether the export of the exporting entity's resource will result in an increase in the electric power requirements of any of its customers in the PNW and whether the resource could be conserved or otherwise retained in the PNW for service to load in the PNW.

If BPA's determination results in a finding that the proposed export of a resource would result in an increase in BPA's electric power requirements of any of its customers under BPA's requirements power sales contracts, and the resource could have been conserved or otherwise retained to serve regional loads through reasonable measures, then BPA is required to exclude from its firm power load obligation under the exporting utility's power sales contract, the amount of power and energy of the export sale and for the duration of such sale.

If, on the other hand, BPA finds that the export of the PNW resource would not result in any increase in the electric power requirements of BPA for that customer or any other customer, and BPA finds that the energy could not be conserved or otherwise retained for



service to regional load by reasonable measures, then BPA will not decrease its obligation to the exporting utility under its power sales contract. A determination is essentially a factual evaluation of regional loads and resources available on a planning basis and BPA's firm power load obligations and resources, and how the resource(s) proposed for export fit into the resource mix available to customers and BPA.

In implementing Northwest Power Act, Section 9(c), BPA must reasonably evaluate the risk of BPA becoming obligated to acquire additional resources which it would otherwise not plan to acquire to serve increased load obligations as a result of the New Owner's ability to make an export. For this Section 9(c) Policy on Non-Federal Participation (NFP Section 9(c) Policy), BPA will apply its prior case-by-case interpretations on Section 9(c) of the Northwest Power Act. It is not BPA's proposal to change these prior policies and interpretations under this NFP Section 9(c) Policy.

Rather, it is BPA's intent in this section 2.0 to address, for the initial exports by New Owners, any Section 9(c) issues raised by the export by New Owners of up to 725 MW of regional resources, which is currently the maximum amount of PNW-PSW AC Intertie capacity available under Non-Federal Participation. (See Appendix A, Non-Federal Participation Section 9(c) Study.) As a result of the determinations made under this NFP Section 9(c) Policy, other BPA customers, public interest groups, the public and each New Owner will know how BPA will apply its NFP Section 9(c) Policy determinations under Public Law 96-501, the Northwest Power Act, to those resources the New Owners initially intend to export.

BPA will also apply its NFP Section 9(c) Policy to subsequent 9(c) related determinations whenever PNW resources are exported whether by New Owners or by third parties over a New Owner's PNW-PSW Intertie share.

## **2.2 Prior Northwest Power Act Section 9(c) Case-by-Case Determinations**

### **2.2.1 LTIAP Assured Delivery (Exhibit B)**

LTIAP section 4(a)(4)(A) and (B) "Waiver of Service Obligation" requires a PNW utility exporting under an Assured Delivery contract to agree as a condition of its Assured Delivery contract to reduce BPA's firm load obligation to the utility engaged in the export, for a specified period, and in an energy amount equal to the amount of energy for which the Assured Delivery contract is provided. (The reduction of BPA's obligation to serve firm load when an export of a regional hydro resource is made, begins with the Operating Year the export deliveries start, while an export of a thermal resource is based on a notice from BPA that BPA is in load-resource balance and the exported resource is needed to meet firm power requirements load in the PNW.)

### 2.2.2 October 1983 - BPA/Montana Power Company

In response to a letter inquiry from legal counsel for the Montana Power Company, the customer asked, if in interpreting Northwest Power Act Section 9(c), BPA would reduce a customer's firm energy requirements by the amount of firm energy generated at a customer's hydroelectric project and exported outside the region, even when that resource is not listed in a customer's firm resources exhibit. BPA's Office of General Counsel responded that such exported hydroelectric power would be excluded (decremented) from BPA's firm power load in determining BPA's obligation to a customer under its requirements contract and excluded from the customer's firm energy requirements under Sections 1(f) and 3(d) of the Act of August 31, 1964, (The Northwest Preference Act) because the hydroelectric power could either be conserved or kept available for use against the customer's loads in the region.

Montana Power Company then asked if energy from utility's thermal resources also not included in a customer's firm resource exhibit would be similarly excluded (decremented) if the resource were exported. BPA's Office of General Counsel responded that exported power from thermal projects which were currently listed in a customer's firm resources exhibit as available to serve the customer's regional firm power loads, similarly would be excluded from BPA's firm load obligation to the customer.

### 2.2.3 BPA/Tacoma Public Utilities (SCBID Hydroelectric Resource)

In a March 19, 1984, letter from BPA to Tacoma Public Utilities regarding the export by Tacoma Public Utilities of its South Columbia Basin Irrigation District (SCBID) hydroelectric resource, BPA determined that Tacoma Public Utilities' SCBID resource was conservable and could be kept available to meet Tacoma Public Utilities' energy loads in the Pacific Northwest. Tacoma Public Utilities concluded an export sale contract of its SCBID hydro resource with the Western Area Power Administration (California) and BPA reduced Tacoma's firm power load requirements on BPA in the amount of the export sale.

BPA said the following in its letter to Tacoma Public Utilities:

"\* \* \* While BPA agrees with the City of Tacoma \* \* \* that [S]ections 5(b) and 9(d) of the [Northwest Power Act] allow a utility the flexibility to determine whether resources will be used to serve a utility's firm load, these sections do not permit a BPA customer to circumvent BPA's obligations under [P.L. 88-552] the Regional Preference Act for the reasons described below.

"Section 3(d) of the Regional Preference Act restricts BPA's ability to sell firm power to a utility to replace hydroelectric energy generated in the Pacific Northwest and disposed of outside the region which a utility could have kept available for its own needs in the region. Section 3(d) allows BPA to sell as

replacement for such energy only surplus energy subject to cut-off on 60 days' notice.

"BPA has determined that Tacoma could have kept for its own use the hydroelectric energy generated from Tacoma's share of the projects on the South Columbia Basin Irrigation District (SCBID) canals. \* \* \*

"A customer's ability to determine which resources would be used to serve its firm load pursuant to [S]ection 5(b) of the [Northwest Power Act] is limited by the requirements of [S]ection 3(d) of the Regional Preference Act as incorporated in [S]ection 9(c) of the [Northwest Power Act]. Section 9(c) directs BPA, in making any determination of the amount of firm power BPA would sell Tacoma under its power sales contract, to exclude from a customer's entitlement to purchase firm power (1) hydroelectric generated energy excluded from a utility's firm power requirements pursuant to [S]ection 3(d) of the Regional Preference Act and (2) electric energy from other resources a utility determines will be used to serve its firm load pursuant to [S]ection 5(b) which is sold by the utility outside the region and which increases a utility's firm energy requirements as a result of such sale. \* \* \*

"BPA's obligations under [S]ection 3(d) of the Regional Preference Act and [S]ection 9(c) of the [Northwest Power Act] to exclude from a customer's entitlement to purchase firm power hydroelectric energy sold outside the Pacific Northwest are triggered irrespective of whether a sale of hydroelectric generated energy outside the region increases a utility's firm energy requirements on BPA as a result of the sale. Sales by BPA of firm [requirements] power to replace hydroelectric generated energy sold outside the Pacific Northwest are precluded even if a utility had not elected to use such hydroelectric generated energy to serve its own firm loads under Section 5(b)(1) of the Northwest Power Act."

The policy principles and interpretation applied in these earlier requests by customers for determinations on the consequence of a proposed hydro or thermal resource export upon BPA's firm power load obligation to the customer (electric power requirements) under Section 9(c) of the Northwest Power Act and the customer's energy requirements under Section 1(f) of the Northwest Preference Act, will be applied when considering current and future NFP related 9(c) determinations.

### **2.3 Legal Analysis of Section 9(c)**

BPA's legal analysis of Section 9(c) is found in Appendix B.

## 2.4 Northwest Power Act Section 9(c) Policy Background

### 2.4.1 Section 9(c) Policy Background

The NFP Section 9(c) Policy is intended to facilitate BPA's determinations regarding the export by New Owners of the following: (1) newly developed regional resources which have never been dedicated in any firm resources exhibit; and (2) existing regional resources (which are not hydro) which are not in any BPA customers' firm resources exhibit and which have been offered for sale to BPA and the region but have not been acquired by any PNW entity. The NFP Section 9(c) Policy applies previously defined policy on the export of regional resources which are currently dedicated to serving firm loads in any utility's firm resources exhibit and is not intended to encourage export, particularly when BPA and some of BPA's utility customers are in load/resource balance or deficit.

In order to be responsive to the New Owners' need for a NFP Section 9(c) Policy determination, BPA intends the application of this NFP Section 9(c) Policy determination (based on BPA's supporting factual analysis) to be limited initially to those exports proposed by New Owners who have obtained or may obtain a share of the Intertie. These initial Section 9(c) determinations need to be made so that New Owners will know whether the proposed export will result in BPA decrementing their firm power load requirements under their Section 5(b) utility power sales contract.

### 2.4.2 The Policy

The following are the major components of BPA's NFP Section 9(c) Policy and determinations regarding Capacity Owners proposed exports:

- (a) BPA's Office of Energy Resources completed a study regarding the probability of any increase in BPA's firm load obligations of the exporter or any other customers' energy obligations as a result of an export by a New Owner of up to 725 MW of Pacific Northwest resources. BPA's analysis used the following information: BPA's White book data; customer load/resource information; customer resource stacks, and the least-cost plans of those utilities who have stated in the past that they are not planning to place load on BPA;
- (b) Under its initial NFP proposal, New Owners will be able to export up to a maximum of 725 MW of regional resources over their transmission capacity;
- (c) The NFP Section 9(c) Policy will be consistent with BPA's prior policy and interpretations under Northwest Power Act Section 9(c) and Northwest Preference Act 3(d) as noted in letter response determinations, e.g., letter to Tacoma Public Utilities (SCBID);

- (d) BPA will apply its NFP Section 9(c) Policy to the specific resources of New Owners based on the information provided which describes specific resources and categories of resources for export;
- (e) Under BPA's NFP Section 9(c) Policy, newly developed thermal resources not in any firm resources exhibit may be exported by a New Owner without any decrement of a New Owner's Section 5(b) utility power sales contract (limited by the 725 MW);
- (f) Exports of regional hydro resources, and thermal resources in firm resources exhibits, will result in a decrement of the New Owner's Section 5(b) utility power sales contract especially if firm power is being exported;
- (g) Seasonal exchanges between the PNW and PSW which result in no net energy export out of region or loss to the region on an annual basis will not result in a decrement of BPA's firm power load obligation under a New Owner's power sales contract. Seasonal exchanges generally return an equal or greater amount of energy when needed during the Operating Year. There should be no need for the utility to place additional load on BPA and for BPA to acquire replacement energy resources. An increase in annual energy purchases by the exchanging utility should not be needed in the PNW to support an exchange;
- (h) System sales may result in a reduction in BPA's firm load obligation to the exporting customer under its requirements contract with BPA because the export is not limited to specific resources and such sales could involve the export of available hydro resources, thermal resources dedicated to serve regional load in a firm resources exhibit, or indirect sales of Federal requirements power and energy inconsistent with the provisions of the customer's power sales contract Exhibit A, General Contract Provisions; Section 9(c) of the Northwest Power Act; and Sections 2, and 3(d) of the Regional Preference Act. However, if the system sale consists of identifiable resources which would be allowed as exports without a decrement if they were exported as "stand alone" resources and the customer's obligation to deliver power or energy out of region is limited to such resources, or such delivery is terminable in favor of the customer's PNW loads and exercised prior to increasing the customer's firm requirements purchase from BPA, then BPA will make a case-by-case determination of whether a system sale will result in a decrement of the New Owner's Section 5(b) power sales contract;
- (i) BPA will consider whether the export obligation of the New Owner includes the right to terminate delivery of energy and power in favor of PNW loads in its export sale. If the utility would discontinue its export sale of a resource, on notice from BPA that the resource will be needed by a certain date to serve load in the PNW; then depending upon specific contract terms, BPA will make a case-by-case determination of whether to decrement the customer's firm power requirements load obligation; and
- (j) A New Owner may decide to offer a resource not dedicated to PNW load to BPA and other PNW generating utilities at the New Owner's cost including a reasonable rate of

return. If the resource is not a hydro resource and is not purchased after being offered in the region, it may be exported without a decrement of the New Owner's Section 5(b) utility power sales contract.

## **2.5 Issues Raised by Customers and BPA's Response**

On April 2, 1993, BPA mailed out its proposed NFP Section 9(c) Policy to the 11 Non-Federal Participation Memorandum of Understanding signers, who would potentially be allocated a share of Intertie and who would need to know the effect of BPA's NFP Section 9(c) Policy on their proposed export sales. The NFP Section 9(c) Policy only addressed those exports of New Owners who export regional resources over their share of the Intertie. BPA also sent its proposed NFP Section 9(c) Policy to 800 interested parties, including other BPA customers, public interest groups and members of the general public who had previously shown an interest in Non-Federal Participation. BPA's comment period closed on April 30, 1993. The Official Record includes six letters received during the public comment period on the proposed NFP Section 9(c) Policy. These comments are part of the Official Record.

BPA sent out a letter on July 22, 1993, to the Non-Federal Participation interested parties and a letter on July 30, 1993, to the six remaining prospective New Owners summarizing the comments and reporting on BPA's next steps. BPA explained that it would not be able to make final Section 9(c) determinations on proposed exports until after the Non-Federal Participation Environmental Impact Statement had been approved by BPA and the Department of the Energy and the Non-Federal Capacity Ownership Record of Decision had been signed.

BPA reviewed the comments received, identified the concerns expressed, and gives its response in this section 2.5. For each specific subject area the issue is stated, the comments are summarized, and BPA's analysis and the decision made in response to the comments are presented.

BPA received comments from Emerald People's Utility District; Eugene Water & Electric Board; PacifiCorp (PacifiCorp sought and received a brief extension of the comment period); Pacific Northwest Generating Cooperative; Snohomish County Public Utility District No. 1; Tacoma Public Utilities; and Washington Water Power Company.

### **2.5.1 Issue - Does Section 9(c) Allow a Decrement Only if a Resource is Dedicated to Serve Firm Load?**

#### ***Customer Comments***

*Emerald People's Utility District* - Sections 9(c) and 9(d) of the Northwest Power Act require BPA to make specific findings relative to the proposed export before it can decrement requirements services and avoid furnishing transmission for the export. Applying a blatant policy approach to decrement requirements service is inconsistent with

the Northwest Power Act. The specific findings are as follows: (1) For hydro apply the Regional Preference Act; and (2) For nonhydro the resource must have been dedicated to the firm load of the customer and the energy must have been sold outside the region, that customer's firm requirements or the firm requirements of other customers are increased, and through reasonable measures, the energy could not have been conserved or otherwise retained for service to Northwest loads. If any of the applicable (hydro versus nonhydro) findings are not met, BPA service should not be decremented and 9(d) should be examined to determine if BPA must supply transmission services.

*Eugene Water & Electric Board* - Eugene Water & Electric Board's position regarding the Office of Energy Resources Study supporting the proposed NFP Section 9(c) Policy is that Section 9(c) was intended to allow a utility served by BPA to make a determination concerning whether the utility would take a nonhydro resource to load or sell the output of the resource in whole or in part to another utility in the region or outside of the region. Eugene Water & Electric Board's position is that the first question in deciding whether the utility will face a decrement depends by law on the utility's decision whether to dedicate the resource to load and not on any BPA analysis. The NFP Section 9(c) Policy document says, "New Owners will be able to export up to a maximum of 725 MW of regional resources." There is no limit imposed by Section 9(c) as to the amount of resources that may be exported. This is reinforced by Section 9(d). BPA has no right or basis to determine that a nonhydro resource cannot be exported because BPA believes that the resource sometime in the future might be used to serve regional loads. Eugene Water & Electric Board objects to BPA saying that newly developed thermal resources will generally be allowed to be exported by a New Owner without any decrement of their section 5(b) utility power sales contract. Eugene Water & Electric Board thinks that export of regional nonhydro resources never dedicated to firm load is allowed under Section 9(c) without a decrement. Eugene Water & Electric Board states that BPA in its proposed NFP Section 9(c) Policy is treating as policy matters issues that were resolved by Congress and argues that the policy fails to recognize that if a utility has not taken a nonhydro resource to load, Section 9(c) does not allow BPA to decrement the utility if the resource is sold outside the region.

Eugene Water & Electric Board agrees that BPA has some discretion and agrees that BPA can allow the sale of a resource without decrement that has been used to meet regional loads if BPA determines that such a sale will not increase its obligations to meet regional loads. Furthermore, before it imposes a decrement BPA is required to make a policy determination that the output sold could not have been through reasonable measures conserved or retained for service to regional loads.

*Pacific Northwest Generating Cooperative* - Most troubling is the idea that resources which had never been committed to Northwest load could be decremented by BPA. Dedication of a resource to firm load is an integral and explicit part of Section 9(c) and BPA's proposed and future Section 9(c) policies should recognize this.

*Snohomish County Public Utility District No. 1* - Restrictions of non-Federal hydropower are governed by the Northwest Preference Act. Restriction on export of non-Federal thermal pursuant to Section 9(c) apply only to resources which have been dedicated to serve firm load in the region. Section 9(c) only permits restrictions on exports of non-Federal thermal when power has been dedicated to serve firm load; power is sold outside the region; as a result of the sale BPA's obligation to serve firm load is increased and the thermal power saved could be conserved for sale in the Northwest. If implemented as proposed the language would inject unpredictability into the use of Third AC capacity by Non-Federal Participation participants, raise serious questions about investing in the Third AC Intertie and provoke time wasting litigation which is likely to delay implementation of Non-Federal Participation.

### ***BPA Analysis and Decision***

Some of the BPA customers who commented are concerned about BPA taking a policy approach to decrementing requirements service. BPA agrees that the statute is the basis for the BPA Administrator to make a Section 9(c) determination whenever a Pacific Northwest utility with a BPA utility power sales contract makes an export of a Pacific Northwest resource. However, BPA as a Federal power marketing agency has a right to take a case-by-case approach or develop policies that provide more detail on how it intends to carry out its statutory responsibilities. As a result, BPA has chosen to develop a NFP Section 9(c) Policy.

BPA agrees with its customers that its Section 3(d) and Section 9(c) determinations must include the following elements: (1) whether the Pacific Northwest resource being exported is a hydro or thermal resource, (2) whether the resource has been dedicated to serve regional requirements load, (3) whether the load of the exporting customer or that of any other Pacific Northwest customer would increase as a result of the export, and (4) whether the energy could have been conserved or otherwise retained for service to Northwest loads.

However, the BPA Section 9(c) determination is neither simple nor automatic. First, there is no circumstance in which BPA can prevent an export of a Pacific Northwest resource. The only question is whether BPA has a legal basis to decrement the New Owner's utility power sales contract. Second, it is a little more complicated than simply saying the resource is thermal and is not in a firm resources exhibit and therefore can be exported without decrement. Although BPA cannot prevent an export, BPA can decrement an exporting customer's BPA utility power sales contract, if the export increases the requirements load of BPA or another Pacific Northwest utility customer of BPA, either now or in the future. BPA must take into account the load/resource situation in the Pacific Northwest at the time of the export and in the foreseeable future. If BPA or the region is experiencing a major deficit, this may well impact BPA's determination whether to decrement. BPA must also look at the cumulative impact of separate exports of regional resources although this concern was addressed in Non-Federal Participation because the initial Capacity Ownership allocation was 725 MW. There is a reasonableness



factor of how far into the future BPA should look. If the export will result in an increase in load in the Pacific Northwest, then BPA must determine whether the resource could have been conserved or retained in the region to serve requirements load.

BPA agrees that there is no 725 MW limit in Section 9(c) and there is no limit imposed by Section 9(c) on the amount of resources that may be exported from the Pacific Northwest. However, in order to sign a Capacity Ownership Agreement with New Owners, BPA has a variety of legal and process steps it must comply with in a relatively short time period. BPA must comply with the National Environmental Policy Act of 1970 (Public Law 91-190), with its statutes and with its public involvement process steps. With limited time, BPA chose to develop a Non-Federal Participation policy approach specific to the Northwest Power Act, Section 9(c), rather than a broad-based 9(c) policy which would have addressed all exports from the Pacific Northwest. The 725 MW sets the parameters for BPA's analysis of the impact on the region (environmental, power supply, transmission capacity, etc.) for the initial exports under Non-Federal Participation.

For the purposes of the BPA Office of Energy Resources' analysis of the initial Non-Federal Participation exports, BPA examined the following: (1) the impact on BPA and the region of a maximum of 725 MW of Pacific Northwest resources being exported (this was the amount of Intertie transmission capacity that was initially offered by BPA); (2) the factual basis of each transaction including the type of resource being exported; (3) whether it had been in a firm resources exhibit; (4) the type of transaction (power sale, exchange, etc.); and (5) the duration of the transaction. BPA concluded that in all but one case involving the export of regional hydro energy that the Non-Federal Participation exports could occur without a decrement of the New Owners' utility power sales contracts with BPA.

#### 2.5.2 Issue - Should BPA Adopt a Case-by-case Approach to System Sales?

##### ***Customer Comments***

*Emerald People's Utility District* - If a system sale is restricted to the sale of only resources that would individually not require a decrement pursuant to Section 9(c) then such sale should not result in a power sales contract decrement.

*PacifiCorp* - BPA should not decrement the Section 5(b) power sales contract for system sales if the selling utility can support the sale with surplus firm energy from thermal generating units not included in its firm resources exhibit. If a BPA customer possesses only regional generation resources as listed in its firm resources exhibit and makes a system sale, BPA's conclusions about system sales are correct as to the effect of that system sale. PacifiCorp should be able to market to other utilities a system sale equal to its surplus regional and extra regional thermal resources without jeopardizing PacifiCorp's entitlement to BPA power to meet Northwest regional loads. Participants agree that such marketing cannot constitute the export of hydro resources, conservable thermal resources in a firm resources exhibit or the indirect sale of Federal power and energy. PacifiCorp

could market power either as a sale from designated generating units or as a system sale. In both cases the amount of energy sold and the impact, or absence of impact, on BPA would be identical. However, a system sale permits PacifiCorp to offer greater operational flexibility to the purchaser and allows PacifiCorp to use the pricing permitted for its resource pools as filed with the Federal Energy Regulatory Commission. PacifiCorp assigns a pool of generation resources to a sale designated as a system sale for Federal Energy Regulatory Commission pricing purposes. If PacifiCorp makes a system sale having adequate surplus nonhydro resources, it should still be able to use a pool including non surplus or Pacific Northwest hydro resources to determine the price of the system sale. In order to carry out the purposes of BPA's NFP Section 9(c) Policy in the event of a system power sale, the selling utility should be required to demonstrate that it has available surplus firm energy from thermal generating units not included in its firm resources exhibit in an amount at least equal to the amount of energy to be exported. To the extent of such surplus the sale of power cannot affect BPA's power supply obligations. However if the utility cannot make the above showing, BPA would be correct in concluding that the export involves hydro resources, conservable thermal resources in a firm resources exhibit, or the indirect sale of Federal power and energy.

*Snohomish Public Utility District No. 1* - Snohomish Public Utility District No. 1 feels that BPA's proposed policy on system sales is too draconian. Snohomish Public Utility District No. 1 states that proper application of Section 9(c) to system sales requires a practical rule which takes into account the diversity of system sales. Snohomish Public Utility District No. 1 recommends that BPA make case-by-case determinations on system sales. The customer should be required to submit an operating plan which supports the sale. To the extent the operating plan shows that firm power from hydro resources or thermal resources dedicated to serving firm regional load will be supporting the system sale, BPA should decrease its firm deliveries by an amount equal to the firm power from such resources used to support the system sale.

### ***BPA Analysis and Decision***

BPA's policy goal as it addresses proposed system sales is to decrement only those exports which include PNW hydro resources, thermal resources in firm resources exhibits, and prohibited resales of Federal power. BPA agrees with its customers that if the resources included in a system sale are ones that would otherwise qualify for export without a BPA decrement, if they were exported on a resource specific basis, then BPA should not decrement the sale simply because it is a system sale, so long as the resources are clearly identified and meet all of the other statutory and policy criteria for export without a decrement. BPA agrees with Snohomish Public Utility District No. 1 that the New Owner who wants to make an export using a system sale should be required to submit an operating plan and the New Owner would have the burden to show that the export did not contain power and energy from hydro resources, thermal resources in a firm resources exhibit or involved prohibited resale of Federal power. If there were, BPA would decrement the exporting utility.

### 2.5.3 Issue - Will BPA Reconsider its Prior Case-by-Case Determination?

#### ***Customer Comments***

*Tacoma Public Utilities* - BPA's statement that its proposed NFP Section 9(c) Policy will be consistent with its prior case-by-case approach to Section 9(c) determinations appears to be a BPA interest. Has BPA adequately considered if its interest in consistency with prior determination might be offset by other considerations (e.g., Since 1984, BPA and others have become more aware of benefits for interregional power transactions and benefits they can produce)? Tacoma Public Utilities' sale to the Western Area Power Administration is designed to capture some of these benefits. Tacoma Public Utilities encourages BPA to include facilitation of efficient power supply markets as a major interest to be promoted under the NFP Section 9(c) Policy. Tacoma Public Utilities previously expressed its concern that BPA's prior case-by-case determination affecting Tacoma Public Utilities went beyond the intent of the Northwest Power Act. Tacoma Public Utilities said that at the time (1984) BPA made its determination, BPA was facing downward pricing pressures because of its significant power surpluses and therefore BPA's Section 9(c) determination may have been influenced by its other interests at the time. Since these market forces have changed with the depletion of the regional power surplus, then BPA should no longer have the incentives to protect its "market power" by limiting Pacific Northwest utilities access to Pacific Southwest markets and since BPA now seems to concede the export of certain thermal resources can be consistent with Section 9(c) then BPA should be willing to revisit its prior determinations regarding the export of resources that produce energy only during periods that are not needed to serve regional firm loads. BPA should recognize the net overall benefits from the export of renewable nonpolluting resources especially when the export of these resources does not increase the firm energy requirements of BPA or its customers. Tacoma Public Utilities requests that BPA recognize Tacoma Public Utilities' SCBID hydro resources along with other exclusively spring and summer producing projects built on irrigation canals as not the type of hydroelectric resources envisioned in Section 9(c).

#### ***BPA Analysis and Decision***

BPA stands by its 1984, Section 9(c) case-by-case determination that Tacoma Public Utilities' export of the SCBID hydro energy to Western Area Power Administration could have been conserved to serve requirements load in the Pacific Northwest. The only change between the former Tacoma Public Utilities transaction and their current export under NFP is that the transmission is now partially an Assured Delivery transaction under BPA's LTIAP and partially an export utilizing Tacoma Public Utilities' Non-Federal Participation share of Intertie transmission capacity. BPA's 1984 determination is still valid today because the law it is premised on has not changed since 1984. It is BPA's interpretation under Section 3(d) of the Regional Preference Act that exports of Pacific Northwest hydro are conservable and any export of such hydro will result in a decrement of the exporting utility's power sales contract. As a result, Tacoma Public Utilities will

have to continue to provide a "phantom resource" in its firm resources exhibit for its export sale or BPA would have to decrement its requirements power sale to Tacoma Public Utilities in the amount of the export to WAPA.

### ***Customer Comments***

*Washington Water Power Company* - Washington Water Power Company noted that in discussing its prior case-by-case determinations that BPA did not discuss the Washington Water Power Company joint venture. Washington Water Power Company referenced Contract No. DE-MS79-92BP92871, a joint venture with BPA and Northern California Power Agency and asked whether BPA has carried this case-by-case determination over into its new NFP Section 9(c) Policy. Washington Water Power Company would appreciate consideration of the Northern California Power Agency agreements in connection with the proposed NFP Section 9(c) Policy.

### ***BPA Analysis and Decision***

No, BPA has not carried this determination into its NFP Section 9(c) Policy. Washington Water Power Company has not acquired a share of Intertie under Non-Federal Participation and BPA is not developing a general Northwest Power Act, Section 9(c) policy. As noted in its NFP Section 9(c) Policy development, BPA is not modifying its prior case-by-case Section 9(c) determinations.

#### **2.5.4 Issue - Does BPA's NFP Section 9(c) Policy Include Restrictions Not Found in the Statute?**

### ***Customer Comments***

*Eugene Water & Electric Board* - Including recall terms in an export to avoid a decrement is an unwarranted policy restriction on the customer's legal rights if the export is not hydro and the customer has not taken the resource to load. BPA does not have a right under the Northwest Power Act to require the offer of a resource to BPA at cost plus a reasonable rate of return to avoid a decrement of requirements service.

Further, Eugene Water & Electric Board is concerned that BPA's proposed NFP Section 9(c) Policy may place additional restrictions in the way of completing Non-Federal Participation transactions which do not exist in the statute (Northwest Power Act, Sections 9(c) and 9(d)). The NFP Section 9(c) Policy document says that "New Owners will be able to export up to a maximum of 725 MW of regional resources." There is no limit imposed by Section 9(c) as to the amount of resources that may be exported. This is reinforced by Section 9(d). BPA has no right or basis to determine that a nonhydro resource cannot be exported because BPA believes that the resource sometime in the future might be used to serve regional loads.

*Emerald People's Utility District* - Emerald People's Utility District believes BPA's policy is improperly directed at and stated in terms of 725 MW of Non-Federal Participation. There is no need to define the policy that way. The NFP Section 9(c) Policy should do nothing to validate the level of Non-Federal Participation. BPA can and should validate how Section 9(c) operates regardless of the amount of Non-Federal Participation.

### ***BPA Analysis and Decision***

Eugene Water & Electric Board is concerned about BPA including a criterion in its NFP Section 9(c) Policy which would allow an exporting New Owner to voluntarily recall a resource when needed in the Pacific Northwest in order to avoid a decrement of the exporting utility's power sales contract at the time the resource is exported. Emerald People's Utility District argues that BPA has no right to impose such a condition under Section 9(c). However, BPA included in the LTIAP, which withstood court challenge, a provision that when a Pacific Northwest hydro resource was exported BPA could decrement the exporting utility's utility power sales contract at once and if the resource being exported was a thermal resource the decrement would occur upon notice from BPA. The concept BPA is trying to address in its NFP Section 9(c) Policy is allowing a New Owner to export a thermal resource until such time as it is needed in the Pacific Northwest, without an initial decrement, so long as the resource is recallable. This should make the transaction more valuable to the Pacific Southwest buyer, which should allow the exporting utility to get a higher rate and make the transaction more salable to the regional consumers of the exporting utility.

#### **2.5.5 Issue - Miscellaneous Issues Raised by the Prospective New Owners.**

**2.5.5.1 Customer Comment - PacifiCorp** - The proposed policy's Section 10 language should read: "the New Owner's cost, *including* a reasonable rate of return."

BPA's proposed NFP Section 9(c) Policy should be equally applicable to sales of more than 725 MW of Non-Federal Participation Intertie if BPA chooses to offer more than the initial 725 MW.

### ***BPA Analysis and Decision***

BPA will make the "including" change in the NFP Section 9(c) Policy.

BPA's NFP Section 9(c) Policy would be applied to more than 725 MW if more Non-Federal Participation shares of transmission capacity are offered in the future.

**2.5.5.2 Customer Comment - Pacific Northwest Generating Cooperative** - Pacific Northwest Generating Cooperative does not think the proposed NFP Section 9(c) Policy should apply to third-party wheeling which New Owners may opt to do.

### ***BPA Analysis and Decision***

The proposed NFP Section 9(c) Policy does allow third-party wheeling, so long as the New Owner chooses that option in the Capacity Ownership Agreement negotiation. However, a New Owner will be required to inform BPA when a third party is exporting over the New Owner's share of PNW AC Intertie so that BPA can make its required statutory determination under Section 9(c) and so the right entity's power sales contract is decremented if that is the result of BPA's 9(c) determination.

2.5.5.3 ***Customer Comment - Pacific Northwest Generating Cooperative*** - This policy leaves open the issue of how new resources exported by New Owners will be treated under Section 9(c).

### ***BPA Analysis and Decision***

Initially, the 725 MW is fully subscribed. However, BPA will apply its NFP Section 9(c) Policy criteria to future exports over the life of the facilities.

2.5.5.4 ***Customer Comment - Tacoma Public Utilities*** - Tacoma Public Utilities suggests that the NFP Section 9(c) Policy be revised so that it is applied to a New Owner's net contractual use of Intertie Capacity Ownership, so that BPA would only decrement the amount of net export of a New Owner that is both exporting and importing over its share.

### ***BPA Analysis and Decision***

BPA chose not to adopt this suggestion. BPA looks at the south to north and north to south transmission paths as separate transactions. There will not always be both south to north and north to south transactions going on at the same time, so it would be hard to compute the net difference. In addition, the rated transmission capacity of the south to north path is about one third less than the north to south path. Finally, a New Owner's Intertie share is not based on a net transaction amount.

## **2.6 BPA's Non-Federal Participation, Northwest Power Act, Section 9(c) Policy**

See Appendix C.

### 3.0 ENVIRONMENTAL ANALYSIS

The Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, CEQ 1505.2, sets forth points which must be covered in a ROD for actions requiring an environmental impact statement. Such RODs must state what the decision is, identify all alternatives considered by the agency specifying which were considered to be environmentally preferable, discuss all relevant decision factors including economic and technical considerations, agency statutory missions and balancing of national policy considerations, and discuss practicable means which may be available to avoid or minimize environmental harm from the alternative selected.

Such requirements are met by the March 25, 1994, BPA Administrator's ROD on Non-Federal Participation Capacity Ownership relative to the decision to offer Capacity Ownership. Such information is incorporated herein by this reference. This Section 3.0 will supplement the discussion in the March 25, 1994, ROD to address and clarify certain issues specific to the Capacity Ownership contracts and the NFP Section 9(c) Policy.

#### 3.1 NFP Section 9(c) Policy

The Capacity Ownership alternative analyzed in the NFP EIS also incorporates BPA determinations under Sections 3(d) of the Northwest Preference Act and 9(c) of the PNW Power Act regarding BPA's firm load obligations to the utility if the utility exports its resources. It addresses a utility's ability to request future increases in requirements service in view of resource exports outside the region. Such determinations and BPA's proposed NFP Section 9(c) Policy were found to have no significant environmental effects for the proposed exports by New Owners over their Capacity Ownership shares in that planned BPA resource acquisitions would be unchanged.

The Capacity Ownership alternative analysis reviewed a broad group of BPA and non-BPA resource development scenarios that provided environmental information for 9(c) decisions even beyond the scope of the NFP Section 9(c) Policy. BPA will also apply its NFP Section 9(c) Policy to help it make future 9(c) related determinations whenever PNW resources are exported whether by New Owners or by third parties over a New Owner's PNW-PSW Intertie share.

#### 3.2 Capacity Ownership Contract Issues

Additionally, the Capacity Ownership alternative addresses environmental impacts with respect to operation of existing resources and transmission lines for network as well as PNW-PSW AC Intertie transactions. There is an inherent assumption in the Capacity Ownership alternative that power resources to be marketed using the PNW-PSW Intertie have a transmission path to the PNW-PSW Intertie. As described in sections 1.2.7 and 1.2.8 of this ROD, BPA intends to offer network agreements, to the extent capacity is

available, to match a New Owner's Capacity Ownership share. Such network agreements may be executed at the time the Capacity Ownership Agreements are executed if no new resources or transmission facilities are required. The NFP EIS could not provide environmental information on the site-specific impacts of new resources or lines to provide for network wheeling. Such site-specific environmental impacts must be addressed separately in future NEPA processes if proposals evolve for network wheeling for new resources, or which require new transmission facilities. However, the NFP EIS does provide BPA the environmental information needed to sign a Capacity Ownership Agreement even if information on a new resource to be wheeled in order to use the Capacity Ownership still needs to be collected.

### **3.3 Avoidance of Environmental Harm**

The Capacity Ownership contracts and NFP Section 9(c) Policy are not expected to result in significant environmental impact requiring avoidance or mitigation actions for the same reasons given in section 1.4.3 of the March 25, 1994, Non-Federal Participation Capacity Ownership ROD.



#### **4.0 THE PROPOSED CAPACITY OWNERSHIP CONTRACTS AND NFP SECTION 9(C) POLICY MEET NEED AND PURPOSES**

The NFP EIS statement of need was that BPA and other PNW entities need interregional transfers with the PSW region using the PNW-PSW Intertie. Proposed actions must meet this need and serve the stated purposes to the best degree possible. In the NFP EIS, BPA identified the following purposes:

- Provide fair PNW - PSW Intertie access to non-Federal Parties;
- Support BPA's obligation to assure recovery of costs of the Federal Columbia River power and transmission systems;
- Support acceptable environmental quality; and
- Benefit overall economic and operational efficiency of the PNW and PSW systems connected by the PNW - PSW Intertie.

I have determined that the proposed Capacity Ownership Agreements and NFP Section 9(c) Policy are responsive to the stated purposes in the following ways:

- Consistent with requests from US House of Representatives Committee on Energy and Commerce to offer a type of non-Federal participation in the Third AC Project;
- Provide the mechanism for non-Federal parties to obtain capacity rights in the PNW - PSW Intertie;
- Meet the primary needs of parties expressing interest in participation by providing a long-term contractual right to schedule power with overall rights similar to those of existing PNW - PSW Intertie owners;
- Provide New Owners the ability to exclusive use of their capacity share without regulation by BPA except in the areas of (1) Protected Areas; (2) third-party wheeling; and (3) PNW resource exports;
- Provide New Owners flexibility and opportunity to exercise future rights to (1) increases in PNW - PSW Intertie capacity; (2) sell or assign its capacity rights; and (3) receive operation, maintenance, and scheduling services;
- Incorporate rates that (1) recover the costs associated with the transmission of non-Federal power, including the amortization of the Federal investment in the Federal Columbia River Power System over a reasonable period of years; (2) are designed to be as low as possible, consistent with sound business principles, to encourage the widest possible use of electric power while having regard to recovering the costs of transmitting such power; and (3) provide funds to be used to either reduce new transmission borrowing or returned to Treasury by repaying BPA's outstanding transmission bonds, thus reducing repayment requirements;

- Provide consistency between prior case-by-case 9(c) determinations and BPA's NFP Section 9(c) Policy;
- Apply NFP Section 9(c) Policy to initial and future Capacity Ownership related exports;
- Allow the export of thermal resources (not in a firm resources exhibit) without a decrement; and
- Allow the decrement of export of regional hydro resources because BPA funds such resources conservable to serve PNW loads.

I have reviewed and hereby approve this decision to offer the Capacity Ownership Agreements and adopt the NFP Section 9(c) Policy and the Interpretation of Subsection 9(c), issued in Portland, Oregon, July 13 1994.

/s/ John S. Robertson

Deputy Administrator  
John S. Robertson

**APPENDIX A**

**NON-FEDERAL PARTICIPATION SECTION 9(c) STUDY**

## NON-FEDERAL PARTICIPATION SECTION 9(c) STUDY

### Introduction

Whenever a regional utility exports a Pacific Northwest resource, the Bonneville Power Administration (BPA) is required by the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act), Section 9(c), to determine whether the export will cause an increase in BPA's firm load obligations or those of its customers, and if so, whether the resource could be conserved or otherwise retained using reasonable measures, to serve Pacific Northwest load. If BPA finds that its firm load obligation to that customer or any other would increase as a result of the export, and that the resource could have been conserved or retained for regional load, BPA is required to reduce its firm load obligation to the exporting utility under its power sale contract in an amount equal to the energy being exported for the duration of the export.

BPA proposes to provide Pacific Northwest utilities the opportunity to acquire an allocation share of PNW-PSW Intertie up to a total of 725 megawatts of intertie transmission capacity. BPA is studying this proposal in its ongoing Non-Federal Participation EIS. Because parties interested in acquiring Intertie transmission capacity have requested more than 725 megawatts of capacity, BPA has adopted allocation methodologies that will be studied in the EIS. Prior to the completion of the EIS, BPA will use the preferred allocation methodology to make tentative allocations for the purpose of BPA's negotiations with potential New Owners. The allocation methodologies, including the preferred methodology, place a number of requirements on the parties seeking an allocation. Among these is the requirement that each party provide BPA with a copy of an executed sale or exchange agreement with a Pacific Southwest utility or with countersigned principles for such an agreement by 16 March 1993. If the party submits countersigned principles, it must submit the executed contract to BPA prior to the close of public comment on the draft EIS.

Once the utility proposes to export a Pacific Northwest resource BPA then has a statutory duty under the Northwest Power Act to determine whether the export of the New Owner's resource would result in an increase in the electric power requirements of BPA or of any of its customers under Northwest Power Act Section 5(b) power sales contracts and whether the resource could be conserved or otherwise retained to serve regional load in the Pacific Northwest.

This study provides a factual basis for determining whether the potential export of 725 megawatts of power from Pacific Northwest resources which potential New Owners propose to export, is likely to result in any increase in the short-run or long-run electric power requirements of BPA or any of its customers, and if so, whether a resource that may be exported could be conserved, or otherwise retained to serve regional loads by reasonable means.

This study relies on existing BPA planning studies currently supporting the development of BPA's 1992 Loads and Resources Study, the 1992 Resource Program; current information on the resources planned for export provided by potential New Owners of PNW-PSW Intertie, and studies and conclusions contained in currently available integrated resource plans of those utilities who are not currently placing any firm load obligation on BPA and are not planning to place firm load on BPA.

On the basis of the following analysis of the assembled studies and information described above, BPA may conclude that the potential export of up to 725 megawatts of Pacific Northwest resources, other than hydroelectric facilities or system sales, described by potential New Owners as proposed or potential transactions with Pacific Southwest utilities, would not be expected to increase BPA's firm load obligation to any customer over the 20-year planning horizon of BPA's 1992 Resource Program as a result of exports proposed under the Non-Federal Participation 9(c) Policy. Furthermore, that based on the above conclusion BPA need make no factual finding of whether the resources, other than hydroelectric facilities or system sales, identified by potential New Owners as proposed or potential transactions with Pacific Southwest utilities, would be conservable or could otherwise be retained for serving regional loads in the Pacific Northwest.

#### Resources Planned for Export by New Owners

BPA has requested and received specific information on proposed and potential transactions with Pacific Southwest utilities from regional utilities who have signed the Memorandum Of Understanding (MOU) in 1991 indicating interest in allocation shares of the PNW-PSW Intertie (Table 1). The information provided by these utilities, summarized in Table 1, describes the specific resources, or non-specific system sales, that may be exported; whether they are existing or planned resources; whether they are included in the utility's Power Sales Contract Firm Resource Exhibit (FRE) and various other information pertinent to understanding the current and prospective role for the resource in the Pacific Northwest electric power system.

Of the specific resources, other than hydroelectric facilities, identified by potential New Owners for proposed or potential transactions with Pacific Southwest utilities, none are likely to increase BPA's firm load obligations for any customer as a result of its export.

Table 1. Proposed or Potential Transactions by New Intertie Capacity Owners.

Name	Resource Type	Capacity (MW)	In FRE? [1]	Exist. or Planned	Type of Trans.
Clark	Cogen/CCCT	75	No	Under Const.	Sale
Emerald	Cogen/CCCT	130	No	Under Const.	Sale
Snohomish	Cogen/Wood	43	No	Planned	Sale
Mason Co.	#1 Cogen/Wood	14	No	Planned	Sale
	#2 Cogen/CCCT	49	No	Planned	Sale
Gray's Harbor	Cogen/Gas or Wood	10 to 80	No	Planned	Sale or Exch.
PacifiCorp	System Power	75 to 150	No	Existing	Sale
Seattle	#1 System(Hydro)	60	Yes	Existing	Exchange
	#2 System(Hydro)	100	Yes	Existing	Capacity Sale
Tacoma	System(Hydro)	74	No	Existing	Sale
PNGC	Coal-Steam	51	No	Existing	Sale (25 years)
EWEB	Cogen/Wood	50	No	Existing	Sale (5 years)
	Steam Plant		No	Existing	Sale (5 years)
Puget	System Power	300	No	Existing	Exchange

[1] Resource included in Firm Resource Exhibit.

Source: Bonneville Power Administration, Office of Power Sales. 1993. Summary of Third AC Intertie MOU signatory utility responses to BPA letter of December 17, 1992 from Sydney Berwager requesting information regarding planned use of Third AC Intertie capacity allocation.

The resource exports identified by potential New Owners include hydroelectric facilities and non-specific system sales for which the policy requires equivalent reductions in energy deliveries by BPA. Other specific resources identified by potential New Owners include existing resources that BPA has already determined were not cost effective, and that are not likely to be found cost effective by BPA and other regional utilities, and therefore not likely to be dedicated to serving regional firm loads; or planned resources similar in character to the large number of cogeneration and gas-fired thermal resources that have been offered to BPA through Billing Credits, Competitive Acquisition, Resource Contingency Program and unsolicited proposals.

Existing hydroelectric facilities and system sales proposed for export by regional utilities are specifically distinguished in the proposed Non-Federal Participation 9(c) policy because BPA has either previously made a determination or is applying existing policies. Under the proposed policy these resources, if exported by a regional utility, require an equivalent reduction in energy deliveries from BPA to the exporting utility. As discussed in the proposed policy, the effects on

present and future Federal system firm load of exporting these resources to Pacific Southwest utilities is directly offset by a present or future reduction in firm load obligation of BPA to the exporting utility under its power sales contract and will not increase BPA's net firm load obligation.

Pacific Northwest Generating Cooperative (PNGC) is proposing to export its share of the Boardman coal-fired steam plant (Boardman). This resource is not presently included in a Pacific Northwest utility's Firm Resource Exhibit of its BPA power sales contract. Recently, PNGC proposed a long-term sale of this resource to BPA through BPA's Competitive Acquisition Program. After a careful review of Boardman's system costs, BPA concluded that it was not a cost-effective resource choice for BPA. Appendix 3-A includes a copy of BPA's official notification to PNGC that its proposal was not "selected into the Negotiation Group." Although BPA did not make a formal determination that Boardman was neither reasonably conservable nor retainable for serving regional load, the factors influencing BPA's decision against acquiring Boardman on cost-effectiveness grounds are still valid. Therefore BPA does not consider PNGC's share of Boardman as a cost-effective resource for serving BPA's firm load obligations now or in the foreseeable future.

The remaining proposed or potential resource exports identified by MOU signatories include new thermal resources such as cogeneration facilities or small gas-fired combustion turbines. All but 50 megawatts of these resources are either newly planned or under construction. None of these cogeneration or gas-fired resources are currently in a utility's FRE and provide Federal system firm power resources that BPA would have to replace if exported to the Pacific Southwest. One of the cogeneration facilities proposed has already been offered to BPA as an unsolicited proposal and was rejected by BPA because of environmental considerations.

Both the Northwest Power Planning Council's 1991 Power Plan and BPA's 1992 Resource Program assumed regional supply limits on new gas-fired combustion turbine generation of about 1,500 average megawatts through 2010 due to the uncertainty surrounding future gas prices and availability of supply (Chapter 8, Volume II - 1991 Northwest Power Plan). The market response to BPA requests for proposals for new resources suggests a higher market potential and lower cost. Since the Council's 1991 Plan was published BPA has been offered approximately 10,000 average megawatts of cogeneration and gas-fired generation through Billing Credits, Competitive Acquisition, Unsolicited Proposals and the Resource Contingency Program. The level of market response to BPA's requests for proposals exceeded BPA's expectations (Appendix 3-B shows

BPA's press releases describing the amounts of resources offered to BPA through Billing Credits, Competitive Acquisition and the Resource Contingency Program).

The current amount of cogeneration and gas-fired resources proposed for export to Pacific Southwest utilities is not expected to reduce the supply of similar thermal resources, at comparable prices, available to BPA for firm power service to Pacific Northwest customers.

#### The Potential for Increased Load Obligations on BPA from Computed Requirements Customers

Computed requirements customers that have expressed interest in becoming New Owners of PNW-PSW intertie are not likely to increase BPA's firm load obligation if they export up to 725 megawatts of Pacific Northwest resources, excluding hydroelectric facilities and system sales.

Some actual and planned computed requirements customers are either proposing exports of Pacific Northwest hydroelectric facilities or system sales that under BPA's existing policies and prior determinations, BPA has required an equivalent reduction in the exporting utility's firm load obligation under its Section 5(b) power sales contract. For the other resources proposed for export none of them are planned to serve Federal system or regional firm loads. Since BPA already has planned resource acquisitions equal to its anticipated future Federal system firm load deficits, without the dedication of the proposed exports to the exporting utility's system firm loads, the exports are unlikely to result in increased load obligation for BPA as a result of their being unavailable to BPA.

Pacific Power & Light Company (Pacific) and Puget Sound Power & Light Company (Puget) are the only current BPA contracted computed requirements customers requesting an allocation of intertie. At present none of the contracted computed requirements customers have provided notices under their power sales contract, as required, to place new firm load on BPA. These customers are required to provide BPA generally seven years notice in order to place new firm load on BPA. Integrated resource plans of these utilities do not reveal any plans to place firm load on BPA during the foreseeable future.

Pacific reported its second Resource and Market Planning Program (RAMPP-2) in May of 1992. Their report describes Pacific's 1992 integrated resource planning process and its preferred "Action Plan." In Chapter 3 of the report Pacific describes the "portfolio" of resource alternatives available to serve its customer's electricity needs under a range of possible load growth futures. Although, Pacific identifies "power contracts" as part of its portfolio of resource alternatives, firm power



purchases from BPA are not included among the alternatives. Even under high load growth scenarios analyzed by Pacific and reported in Chapter 4 of the report, Pacific does not look to BPA as a wholesale supplier of firm power. Instead Pacific increases its reliance on cogeneration and gas-fired combined-cycle combustion turbines (PacifiCorp. 1992. Resource and Market Planning Program: RAMPP-2. Portland, Oregon).

Puget published its third integrated resource plan in December of 1991. Table 4 contained in Appendix E of their report lists the "Supply-Side Resource Alternatives" that Puget considered as potential supply alternatives. Puget does not regard wholesale firm power purchases from BPA as a cost-effective resource alternative. In Appendix A of the report that describes the status and accomplishments from plan years 1990-91 Puget concludes that: "Although identified as an issue for 1993, NR Rate Predictability may not be achieved as BPA is not required to address all of the [rates] issues on its list and has not done so in the past. Thus, Puget has kept its NR purchase to a minimum." As with Pacific, the scenario analyses reported in Chapter 6 of their report do not include firm power purchases from BPA under any of the possible load growth futures analyzed (Puget Sound Power & Light Company. 1991. 1992-1993 Integrated Resource Plan. Bellevue, Washington). Puget in its latest submission of an FRE to BPA eliminated the small amount of BPA purchase power, 50 megawatts, it had previously planned on.

Portland General Electric Company (PGE) completed its most recent integrated resource plan in November of 1992. PGE, like other investor-owned utilities in the region, does not consider BPA a viable power supply alternative. In Appendix 6-7 of their 1992 Integrated Resource Plan they describe firm power purchase opportunities, including pricing and availability. Under the section entitled "BPA Purchase" they indicate that they "are not inclined to plan on a purchase from BPA" because of: (1) BPA's seven year notice requirement and uncertainty surrounding the terms and conditions of a long-term firm power purchase from BPA; and (2) concern over the "predictability and stability" of BPA's New Resource (NR) Rate (Portland General Electric Company. 1992. 1992 Integrated Resource Plan. Portland, Oregon).

Since the completion of their 1992 Integrated Resource Plan the Trojan nuclear generating plant (Trojan) has been permanently closed by Portland General Electric (PGE). Although their plan originally scheduled Trojan's retirement in 1996, escalating costs of maintaining Trojan led PGE to close the plant ahead of schedule. The shut-down of Trojan means that the Federal system loses 214 average megawatts of energy that will have to come from other sources. PGE is not requesting an allocation of PNW-PSW intertie and BPA has planned sufficient reserves to cover

the loss of the Federal system's share of Trojan. BPA's plans for covering the loss of the Federal System's share of Trojan are described in Chapter 5 of the 1992 Resource Program entitled "Implementation Plans."

Other investor-owned utilities in the region likewise do not include BPA long-term firm power purchases in their integrated resource plans. Power purchases that are identified are planned to come from sources such as cogeneration, PURPA hydroelectric facilities and thermal plants, and power purchases from utilities outside the Pacific Northwest (Pacific Northwest Utilities Conference Committee, 1990. *The Energy Picture in 2001: The Utilities' View*. Portland, Oregon).

Since the mid 1980s BPA has assumed in its integrated resource planning that contracted computed requirements customers were unlikely to place new firm load requirements on BPA (Chapter III: Bonneville Power Administration, 1987. *1987 Resource Strategy*. Portland, Oregon). This continues to be the operative assumption in BPA's integrated resource planning today and is reflected in BPA's current assessment of loads and resources (The 1992 Pacific Northwest Loads and Resources Study) and BPA's most recent integrated resource plan (The 1992 Resource Program).

#### BPA's Existing Loads and Resource Picture (Whitebook)

The 1992 Pacific Northwest Loads and Resources Study (Whitebook), December 1992, forecasts Federal system firm energy deficits throughout the 20 year forecast under medium, medium-high and high load forecasts. Although loads continue to grow throughout the 1990s two factors are expected to reduce the size of the projected future Federal system deficits. The forecast of DSI loads projects a decline of 100 average megawatts by 1999 and 300 average megawatts by 2013. In 1996 the WNP-1 exchange contract obligation expires returning 340 average megawatts (440 megawatts) of firm energy to the Federal system.

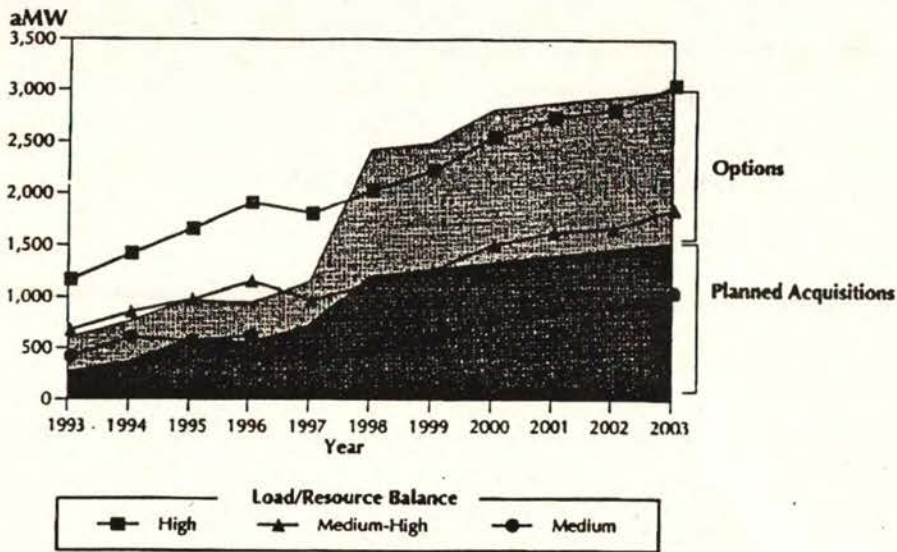
The forecast of Federal system deficits reflects the amount of existing not planned resources assigned to serve Federal system loads. These resources include Federal system hydroelectric facilities and power purchased from non-Federally owned resources. Federal system hydroelectric facilities and non-Federally owned BPA resources and contracts are summarized in Tables 4 and 5 of the 1992 Pacific Northwest Loads and Resources Study (See Tables 4 and 5 in Appendix 3-C). Resources identified by potential New Owners as proposed or potential transactions are not among the non-Federally owned BPA resources that are available to serve Federal system firm loads.

As a result, the size of Federal system firm deficits forecasted by BPA, and for which BPA has planned new resource acquisitions, is not expected to be influenced by any of the proposed or potential resource exports identified by potential New Owners. Regardless of whether potential New Owners exported up to 725 average megawatts of resources they have identified, BPA will still be able to acquire, at comparable prices, either the same resources or similar resources in the same amount as it currently anticipates in order to serve its forecasted firm energy deficits.

BPA's Planned Resource Acquisitions and Resource Options (1992 Resource Program)

The 1992 Resource Program, BPA's integrated resource plan, describes the specific resource actions BPA intends to take over the course of the next 10 years to serve Federal system firm loads. BPA's current resource plan includes acquisition plans for conservation and generation sufficient to meet the most likely range of resource need, that is, up to medium-high load growth. Also, the plan includes resource options that would enable BPA to cover future deficits assuming high load growth. The figure below provides a comparison of BPA planned resources (acquisitions and contingencies) and Federal system resource needs under medium, medium-high and high load growth scenarios.

Figure 1. BPA Planned Resources vs. Federal System Resource Needs



Source: 1992 Resource Program. 1992. Bonneville Power Administration, Portland, Oregon.

BPA's options include contractual options associated with surplus sales contracts that allow BPA to buy firm energy during winter months and/or exchange summer capacity for winter firm energy; and preconstruction options that allow BPA to shorten the lead time necessary to bring generating resources on-line. The amount of existing contractual options depends on the existence of surplus sales contracts. They provide opportunities for converting surplus power sales to capacity/energy exchanges and allow BPA to purchase "supplemental energy" and "optional energy" as well. BPA has 540 average megawatts of existing contractual options available through 2001. The amount of contractual options declines to 350 average megawatts by 2008 and then declines to 54 average megawatts by 2010 as surplus contracts reach the end of their contract term. Federal system resource options are described in detail in Section V of the 1992 Pacific Northwest Loads and Resources Study (See Table 9 included in Appendix 3-C).

The 1992 Resource Program includes a total of 1,450 average megawatts of existing, acquired or planned options that provide an additional insurance for meeting Federal system firm loads in the event of high load growth in the region or unexpected loss of an existing Federal system firm resource. Of that total, 400 average megawatts come from existing surplus sales contracts described above and 800 average megawatts of new options from the Resource Contingency Program. BPA is currently negotiating with developers for the acquisition of new resource options under the Resource Contingency Program. Another 250 average megawatts of additional options are planned from sources which are yet to be specified. BPA has not specified the sources for these resources in order to "maintain a competitive environment" and "explore the full menu of sources of potential generation, and allow BPA to assess the operational flexibility of proposed acquisitions within the Federal system" (See Chapter 5, Generating Resources Strategy: Bonneville Power Administration. 1992. 1992 Resource Program. Portland, Oregon).

BPA's planned resource acquisitions and options will provide sufficient Federal system resources and reserves to meet future Federal system loads regardless of whether potential New Owners of PNW-PSW intertie export up to 725 megawatts of existing and planned resources they have identified as proposed or potential transactions.

## APPENDIX 3-A

**Letter from Bonneville Power Administration to the Pacific Northwest Generating Cooperative that their PNGC Boardman Power Resource Proposal was not selected into the Negotiation Group for BPA's Competitive Acquisition program.**



Department of Energy  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

December 6, 1991

In reply refer to: RMGC

Mr. Joe Nadal  
Pacific Northwest Generating Cooperative  
500 Multnomah, Suite 1480  
Portland, OR 97232-2044

Dear Mr. Nadal:

Thank you for participation in the Bonneville Power Administration's (Bonneville's) Request for Proposals (RFP) for the Competitive Acquisition of Firm Electric Energy. As stated in Section I. of the RFP's Program Description, this RFP is a pilot program for the Agency to assess the benefits and costs of using a competitive process for developing cost-effective new energy supplies. Your willingness to prepare a proposal and participate in the process has helped to insure that this RFP has met that goal.

The response to the RFP was overwhelming--proposals for more than 5,000 aMW were bid for a proposed Supply Block of 300 aMW. Bonneville used the criteria set out in the RFP to evaluate each Resource Proposal in detail (see Enclosure 1). The evaluation criteria, including system cost, non-price environmental factors, and viability, were described in Section IX. of the Program Description and in Amendment 001 to the RFP, dated March 19, 1991. Because this is a competitive process, your Resource Proposal was evaluated solely upon the information submitted by your company and your response to our Supplemental Information Request. Our detailed evaluation has been completed and, based on our evaluation of these materials, your PNGC Boardman Power Resource Proposal has not been selected into the Negotiation Group.

The decision not to place your Resource Proposal in the Negotiation Group is based upon Bonneville's adjusted system cost evaluation of your project. The adjusted system cost is your levelized bid price modified by adjustments for capacity value, displaceability, environmental costs, commercial operation date and contract term, location, additional interconnection costs, seasonality of firm energy deliveries, nonfirm energy values, inertia connection costs, fuel price and dry hole risk. (Additional information on these adjustments can be found in the RFP, pp. 14-16, 18 and in Amendments 001 and 002 to the RFP, dated March 19, and May 15, 1991, respectively.)

While all of these factors may not relate to your proposal, those adjustments which did apply resulted in an adjusted system cost for your proposal in excess of 3.8 cents/kWh levelized 1990 dollars or 7.6 cents/kWh nominal levelized dollars. All Resource Proposals accepted into Bonneville's Negotiation Group have adjusted system costs below this threshold.

We have not included more specific details regarding our evaluation in this letter because of the confidential nature of your company's cost information which was used to calculate the adjusted system cost. Bonneville, however, will make its staff available to representatives of your company for a debriefing on all aspects of the evaluation of your Resource Proposal, by telephone, or in person at our headquarters building in Portland, at your option. We believe that this opportunity will provide your company with useful information, not only on the application of the evaluation criteria to your proposal, but also on the resource characteristics in which Bonneville is interested, and on how to structure a proposal in the future which will meet Bonneville's resource needs.

The decision not to select your proposal for the Negotiation Group is a final decision. As explained in Section II.K. of the RFP's Program Description, your company may appeal this decision by requesting a review by Bonneville. This appeal, which is explained in Enclosure 2 to this letter, must be received by Bonneville by 4:00 p.m. Pacific Standard Time on Monday, January 6, 1992. If you request a debriefing, however, the date for the appeal will be extended to ten days after the date of the debriefing.

We recommend that you send your request for a debriefing or for review by registered mail, courier service, or its equivalent, or hand deliver to:

U.S. Mail

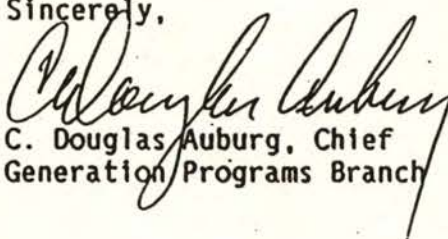
Bonneville Power Administration  
Energy Resources Solicitation Desk  
- RMG  
P.O. Box 3621  
Portland, OR 97208-3621

Courier Service or Hand Delivery

Bonneville Power Administration  
Energy Resources Solicitation Desk  
- RMG  
905 NE 11th Avenue  
Portland, OR 97232

Further information regarding this letter may be directed to Helen A. Goodwin (503) 230-3129.

Sincerely,



C. Douglas Auburg, Chief  
Generation Programs Branch

Enclosure

**APPENDIX 3-B**

**BPA press releases describing the amounts of resources offered to BPA through Billing Credits, Competitive Acquisition and the Resource Contingency Program.**





## Bonneville Power Administration

FOR IMMEDIATE RELEASE  
Monday, October 29, 1990

PORTLAND, Ore. -- Response to the Bonneville Power Administration's first use of a new program to develop sources of energy has been, in the words of one agency official, "encouraging."

BPA had sought 50 megawatts of new projects when it called for bids under its new billing credits program July 9. Instead it got 130.

By the Oct. 10 closing date, BPA had received 85 proposals from 45 Northwest utilities.

"It was a good mix," Paul Norman said. Norman is BPA's Planning Branch chief. "We had a wide variety of proposals from nearly every locale in the region, from large utilities near Seattle and Portland to some of the smallest in Idaho and Montana."

BPA may decide to increase the program budget and fund more than 50 mw worth of proposals.

"Northwest energy use is growing," Norman said. "We know we will eventually need this energy. Why not capture it now?"

"Almost all the proposals appear to be eligible. None duplicate BPA's existing conservation programs. Some move into new areas of energy savings we might not have been able to develop."

Billing credits is a first for BPA. The program is open only to Northwest utilities who buy noninterruptible power from BPA.

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Utilities develop projects that cut their need for power from BPA. BPA then deducts part of the cost from the utility's power bill or pays the utility cash. The amount depends on the amount of power saved and the difference between what BPA would have had to pay to buy the power outright and BPA's wholesale power rate.

"Utilities have shown they are willing to work with us, take the risk and design projects suitable for their systems and their customers," Norman said.

Proposals include:

-- 68 projects to save 31 mw of energy through conservation. Projects range from weatherizing mobile homes to installing high-tech electrical equipment that would cut power losses up to 70 percent.

-- 4 projects for 53 mw through cogeneration. Cogen captures waste heat from an industrial process -- such as drying lumber -- and uses it to turn turbines and produce electricity.

-- 13 projects to generate 46 mw from small hydroelectric dams or methane gas produced by landfills.

BPA plans to complete an evaluation of the proposals and begin negotiating contracts by December. Contracts will be awarded in 1991. All projects would go through an environmental review.

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WP-ALM-7256P



## Bonneville Power Administration

FOR IMMEDIATE RELEASE  
Monday, June 24, 1991

PORTLAND, Ore. -- A new Bonneville Power Administration program to acquire generating and conservation resources has resulted in a flood of proposed projects.

When the solicitation period for its new competitive bidding program ended on June 18, the Bonneville Power Administration had received proposals for 103 such projects. The proposals total more than 5300 megawatts on average each year (amw).

"This is good news for ratepayers because this level of competition should bring lower prices," Doug Auburg, BPA's generation programs chief, said. "I believe it shows that a lot of people are interested in doing business with us."

Competitive bidding is a new program at BPA. It was created to help meet the Northwest's future energy needs by encouraging the development of cost-effective, environmentally-sound conservation and generating resources to meet the growing needs of BPA's customers.

Originally, BPA had planned to purchase 100 amw of new resources through the program. In March it increased that total to 300 amw.

The proposals included 41 conservation projects, totaling about 116 amw, and 62 generating projects, totaling about 5,200 amw. The ideas range from energy savings measures for homes and commercial businesses to wind farms and combustion turbines for generating electricity.

Bidders submitting projects for consideration included utilities and private energy developers.

"Our initial review has been very encouraging," says Auburg. "The proposals are high quality -- the information appears to be complete and thoughtfully presented."

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A-16

BPA has already begun to evaluate the proposals. Due to the program's competitive nature, however, no information about specific bidders or projects can be released until evaluations are concluded. A list of sponsors with whom BPA will negotiate will be announced in December.

The actual number of megawatts purchased will depend on how much power BPA needs at that time, the price and quality of proposals received, and how many megawatts BPA secures through its other programs.

Projects BPA buys under the bid program must begin saving or producing energy on or before Dec. 31, 1997.

Attached is a summary of the types of proposals received.

# # # # #

WP-ALM-8591P

PROPOSAL SUMMARY

Competitive Acquisition Program

BPA has received 103 resource proposals from 54 sponsors (15 conservation sponsors and 39 generation sponsors).

NUMBER OF PROPOSALS

41	Conservation projects for .....	116 amw
62	Generating projects for .....	<u>5209</u> amw
	TOTAL ALL PROJECTS	5325 amw

NUMBER OF PROPOSALS

Conservation Resources

6	Multisector .....	27 amw
30	Residential .....	72 amw
1	Commercial .....	3 amw
3	Industrial .....	14 amw
1	Customer System Efficiency Improvements.....	<u>.2</u> amw
	CONSERVATION TOTAL	116 amw

NUMBER OF PROPOSALS

Generation Resources

5	Combustion Turbines (gas and oil fired) .....	858 amw
15	Combined Cycle Combustion Turbines (gas and oil fired) .....	2546 amw
4	Wind .....	69 amw
5	Hydro .....	235 amw
5	Geothermal .....	105 amw
1	Biomass .....	9 amw
2	Coal .....	119 amw
23	Cogeneration .....	1248 amw
2	Utility System Sales .....	<u>20</u> amw
	GENERATION TOTAL	5209 amw



## Bonneville Power Administration

FOR IMMEDIATE RELEASE  
Tuesday, May 19, 1992

PORTLAND, Ore. -- "The Northwest will have an ample supply of new sources of electric energy, if the response to our options program is any indication."

So said Sue Hickey, BPA's assistant administrator for energy resources.

In March, the Bonneville Power Administration asked for proposals for options on about 800 megawatts of firm -- or noninterruptible -- energy.

By the May 8 deadline, BPA had received 10 times the request -- or about 7,850 mw -- through proposals for 64 separate projects.

"This is great news," Hickey said. "It looks like we will have a solid set of proposals to evaluate."

Proposals include 35 cogeneration projects for 3,748 mw. About half of the cogeneration would rely on waste heat from industrial processes to produce energy.

Another 13 projects would offer 2,674 mw from natural-gas fired combustion turbines.

Nine proposals offered 446 mw generated by coal plants. Four proposals were for 94 mw from wind or geothermal projects.

Proposals will be evaluated to narrow down the contenders to a short list in late June. BPA then will begin discussions with the sponsors and announce a final choice of projects in December.

Those chosen would begin designing, siting, applying for permits and preparing environmental reviews immediately. The preliminary work must be completed no later than Dec. 31, 1995.

Once the preliminary work is done, sponsors would hold the projects until BPA needs the energy.

"Think of it as energy insurance," Dennis Oster, options program team leader, said. "We'll call on options if demand grows faster than expected or if BPA doesn't get the megawatts it wants from its preferred source of energy -- conservation."

A-19 -more-

Option projects also could be used if the Northwest loses a large generating facility, or sees major changes in the hydrosystem operation to accommodate salmon.

Each project must be ready to deliver energy on three years' notice.

Oster said the program could be the first of its kind in the nation.

"We're clearly plowing new ground here," he said. "We've fielded questions about our program from several utilities across the nation. Many of them may give energy options a try if our program works."

He said the large response was not a surprise.

BPA had seen a similar flood of proposals in response to a 50-mw billing credits solicitation offered to utilities in 1990 and a 300-mw competitive bid program opened to utilities and independent power producers in 1991.

All three programs are part of a resource program BPA issued July 1990. BPA's resource program presents the agency's plan for acquiring energy to meet future demand for electric power from its customers. The program is updated every other year.

BPA markets power to 153 utilities and industries in the Northwest.

No information about specific bidders or proposals for the energy options program will be released until the evaluations are concluded.

# # # # #

WP-ALM-0644P

RESOURCE CONTINGENCY PROGRAM  
FACT SHEET

BPA received 64 proposals from 47 sponsors.

Proposals fall into the following categories:

<u>Type of Proposal</u>	<u>Number</u>	<u>Megawatts</u>
Cogeneration	35	3,748
Combustion turbines	13	2,674
Coal plants	9	446
Wind farms	3	65
Geothermal	1	29
System sale	1	unspecified
Other	<u>2</u>	<u>880</u>
TOTAL	64	7,842

Several of the proposed projects were submitted in BPA's competitive acquisition program in 1991. They were resubmitted for consideration in BPA's options program.

Projects are located throughout the Pacific Northwest, Pacific Southwest, the Midwest and British Columbia.

# # # # #

WP-ALM-0644P



## APPENDIX 3-C

**Federal system hydroelectric projects; non-Federally owned BPA resources and contracts; and existing Federal system contractual options (Table 4, Table 5 and Table 9: Bonneville Power Administration. 1992. 1992 Pacific Northwest Loads and Resources Study. Portland, Oregon).**

Table 4

**Federal System Hydroelectric Projects**  
September 30, 1992

Project	Initial Year of Service	Number of Units	Name-plate Rating (MW)	Instantaneous Generating Capacity <sup>1</sup> (peak MW)	Firm Energy (aMW)
<b>U.S. BUREAU OF RECLAMATION HYDROELECTRIC PROJECTS</b>					
Grand Coulee	1941	30	6,450.0	6,684	1,865
Hungry Horse	1952	4	392.0	428	107
Pallsades	1957	4	142.2	164	61
Anderson Ranch	1950	2	27.0	30	11
Minidoka	1909	7	13.4	16	9
Roza	1958	1	11.3	13	4
Black Canyon	1925	2	8.0	10	7
Chandler	1956	2	12.0	13	7
<b>TOTAL BUREAU OF RECLAMATION PROJECTS</b>		<b>52</b>	<b>7,055.9</b>	<b>7,358</b>	<b>2,071</b>
<b>U.S. ARMY CORPS OF ENGINEERS HYDROELECTRIC PROJECTS</b>					
Chief Joseph	1955	27	2,069.0	2,614	1,114
John Day	1968	16	2,160.0	2,484	872
The Dalles	1957	22	1,780.0	2,074	697
Bonneville	1938	18	1,050.0	1,186	537
McNary	1953	14	980.0	1,127	630
Lower Granite	1975	6	810.0	932	188
Lower Monumental	1969	6	810.0	930	191
Little Goose	1970	6	810.0	932	185
Ice Harbor	1961	6	603.0	693	187
Libby	1975	5	525.0	600	197
Dworshak	1974	3	400.0	460	144
Lookout Point	1954	3	120.0	138	24
Detroit	1953	2	100.0	115	34
Green Peter	1967	2	80.0	92	22
Lost Creek	1975	2	49.0	56	23
Albeni Falls	1955	3	42.6	49	26
Hills Creek	1962	2	30.0	35	14
Cougar	1964	2	25.0	29	12
Foster	1968	2	20.0	23	10
Big Cliff	1954	1	18.0	21	11
Dexter	1955	1	15.0	17	8
<b>TOTAL CORPS OF ENGINEERS PROJECTS</b>		<b>149</b>	<b>12,496.6</b>	<b>14,607</b>	<b>5,126</b>
<b>TOTAL BUREAU OF RECLAMATION AND CORPS OF ENGINEERS PROJECTS</b>		<b>201</b>	<b>19,552.5</b>	<b>21,965</b>	<b>7,197</b>

<sup>1</sup>Maximum generation under optimum conditions. Does not reflect reduction to the peaking capacity of the hydro system due to the drafting of reservoirs and other project constraints.

**Table 5**

**Non-Federally Owned BPA Resources and Contracts**

Project	Type	Operator	Date in Service	OY 1993-94 Capacity (peak MW)	OY 1993-94 Firm Energy (aMW)
<b>Existing Non-Federally Owned BPA Resources</b>					
Trojan (30%)	Nuclear	PGE	1976	331	214
WNP-2	Nuclear	WPPSS	1984	1,100 <sup>1</sup>	705 <sup>1</sup>
Boardman	Coal	PGE	1992 <sup>2</sup>	50	29
Packwood Lake	Hydro	WPPSS	1964	30	6
Idaho Falls	Hydro	City of Idaho Falls	1982	18	18
Cowlitz Falls	Hydro	Lewis County PUD	1994	0 <sup>3</sup>	10 <sup>3</sup>
<b>TOTAL NON-FEDERALLY OWNED BPA RESOURCES</b>				<b>1,529</b>	<b>982</b>
<b>Firm Contracts</b>					
Canadian Entitlement				186	62
Restoration, Columbia River Treaty w/Canada				0	-26
Southwest Capacity/Energy Exchange				0	9
Montana Power Capacity/Energy Exchange				0	29
PP&L (Wyoming) Import for Southern Idaho Load				189	94
Basin Electric Cooperative Purchase				120	105
Powerex (TransAlta) Purchase				125	100
WNP-3 Exchange Settlement Agreements				0	113
<b>TOTAL BPA FIRM CONTRACTED RESOURCES</b>				<b>620</b>	<b>486</b>

<sup>1</sup>Efficiency improvements will increase WNP-2 maximum capacity to 1,155 megawatts and maximum capability to 751 average megawatts when completed in OY 1996. WNP-2 expected energy output prior to the efficiency improvements was 715 aMW; however, in OY 1993-94, an extended maintenance schedule reduced WNP-2 generation to 705 aMW.

<sup>2</sup>Seasonally acquired by BPA from PNGC for September through April, OY 1992-93 through 1994-95.

<sup>3</sup>Acquired by BPA on January 28, 1991 and will become operational April 1, 1994. Full energy capability is 22 average megawatts and maximum capacity is 70 megawatts starting OY 1994-95.

to the United States. The Federal system share is 115 average megawatts. This energy, however, is not as valuable as a firm resource because non-treaty storage has a lower refill priority than primary storage reservoirs. Therefore, BPA intends to use the non-treaty storage as a resource option to increase flexibility in operating the hydro

system. Since this energy may not be available every year, it is not included as a firm resource in this loads and resources study. However, it may be included as a firm resource in future studies. Non-treaty storage is included in Table 9, line 6.

**Table 9**

**Existing Federal System Contractual Options  
Energy In Average Megawatts**

OPERATING YEAR <sup>1</sup>	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Termination of PSW Surplus Power Sales	212	212	212	237	237	237	237	237	237	237
2. Exchange Energy From PSW	69	69	68	71	74	73	71	70	69	68
3. Supplemental Energy From PSW	35	36	37	38	39	41	42	43	44	46
4. Optional Energy From PSW	71	71	71	71	71	0	0	0	0	0
5. Termination of PNW Surplus Power Sale	0	0	0	0	0	75	75	75	0	0
6. Non-Treaty Storage	115	115	115	115	115	115	115	115	115	0
<b>TOTAL CONTRACTUAL OPTIONS</b>	<b>502</b>	<b>503</b>	<b>503</b>	<b>532</b>	<b>536</b>	<b>541</b>	<b>540</b>	<b>540</b>	<b>465</b>	<b>351</b>

OPERATING YEAR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Termination of PSW Surplus Power Sales	237	237	237	237	223	187	29	0	0	0
2. Exchange Energy From PSW	67	66	64	64	62	53	25	0	0	0
3. Supplemental Energy From PSW	47	48	49	49	49	46	0	0	0	0
4. Optional Energy From PSW	0	0	0	0	0	0	0	0	0	0
5. Termination of PNW Surplus Power Sale	0	0	0	0	0	0	0	0	0	0
6. Non-Treaty Storage	0	0	0	0	0	0	0	0	0	0
<b>TOTAL CONTRACTUAL OPTIONS</b>	<b>351</b>	<b>351</b>	<b>350</b>	<b>350</b>	<b>334</b>	<b>286</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup>Operating Year (OY) is the 12-month period August 1 through July 31. For example, OY 1993-94 is August 1, 1993 through July 31, 1994.

**APPENDIX B**

**INTERPRETATION OF NORTHWEST POWER ACT SUBSECTION 9(c)**

## **Interpretation of Northwest Power Act Subsection 9(c) Regarding Firm Energy Requirements and Customers' Exports of Resources Out of the Region**

### **I. Introduction**

BPA has an obligation to serve the net loads of its Pacific Northwest customers. At times some of these customers may export power out of the region. In this event, BPA is required by subsection 9(c) of the Pacific Northwest Electric Power Planning and Conservation Act, P.L. 96-501 (the Northwest Power Act) to make certain determinations regarding the effect of such exports on its contractual obligations to provide service to its customers. This interpretation addresses BPA's obligations to its customers to serve their firm energy requirements and how those obligations may change based on a customer's decision to export resources out of the region. Section II addresses BPA's statutory and contractual obligations to serve firm load requirements. Section III discusses the requirements of Northwest Power Act subsection 9(c), its application, and the considerations leading to the 9(c) factual determination.

### **II. BPA's Statutory and Contractual Obligations to Serve**

#### **A. BPA's obligation to serve Pacific Northwest customers' firm power loads**

BPA's obligation to serve the electric power load of its various customer classes is defined by statute. Initially BPA's authorization was to sell electric power under contracts negotiated and entered into with its customers pursuant to subsection 5(a) of the Bonneville Project Act, 16 U.S.C. 832d(a). In 1980, Congress passed the Northwest Power Act, which further specifically defined BPA's service obligations. These obligations are expressed in subsection 5 of that Act. Subsection 5(b) addresses obligations to Northwest public agency, investor-owned utility and federal agency customers. Subsection 5(c) defines residential exchange obligations with utility customers. Subsection 5(d) sets out obligations to provide service to direct service industrial customers under initial contracts. Subsection 5(f) defines any federal power in excess of BPA's obligations under subsections 5(b),(c), and (d), as surplus power that is to be sold in accordance with applicable statutory provisions.

Consistent with those provisions and others, BPA entered into contracts with its utility, federal agency, and direct service industrial customers to provide electric power service for their firm power requirements loads in the Pacific Northwest region. For direct service industrial customers, BPA's obligation under subsection 5(d) is to provide an amount of power equivalent to that which the customer was entitled under contracts dated January or April 1975. 16 U.S.C. 839c(d)(1). Generally, BPA's obligation as to this class of customer is a fixed amount of electric power defined under these contracts as contract demand.

For BPA's preference agency and investor-owned utility customers, BPA is to provide electric power to meet their firm power requirements loads in the region less the amount of firm power from the customer's own resources that they dedicate to serve their utility's regional load. 16 U.S.C. 839c(b)(1). BPA serves a utility's load net of the resources if any, dedicated by the utility to serve loads. Under its 1981 requirements power sales contract, a utility makes modifications to its actual firm power load by the addition or deletion of resources. These additions or deletions are based upon specified notice periods. Utility customers use contract exhibits to show their request for purchases and their dedicated resources on a seven year planning basis. BPA adjusts its need to acquire resources to meet these loads based upon the information submitted by its customers. Because BPA provides firm power requirements service to customers on different purchasing bases, some customers request no or minimal power purchases and others have all of their firm loads and increases in loads (load growth) served by BPA. Also, a customer may choose to add or not add a new resource to its Firm Resource Exhibit and Assured Capability Exhibit.<sup>1</sup>

Subsection 5(c) provides for an exchange of power between BPA and Northwest utilities for residential loads. BPA serves "exchange loads" with preference agency and investor owned utility customers participating in subsection 5(c) contracts. Although these "exchange" contracts may operate as actual power deliveries, the program has been administered as an economic "subsidy" program with dollars paid to the exchanging utility for its eligible loads, rather than as an actual power delivery. *See, Pacific Power and Light Co. et. al v. BPA*, 795 F.2d 810, 812 (1986)(While these agreements are called residential energy exchange agreements, there is not, in fact, any exchange of energy at all, but merely an accounting transaction in which BPA credits a subsidy to investor-owned utilities based upon each utility's average system cost.) Generally, BPA does not deliver federal power under this program to its customers.

### **B. BPA's contractual determinations under subsection 5 regarding its firm power load obligations**

Under its contracts and statutes BPA makes annual and multiyear determinations of its obligations to its Northwest customers. These determinations are important to BPA's resource planning and its annual operation of the Columbia River Power system. In some circumstances, such as an insufficiency of firm resources, these determinations may affect the amount of power BPA is obligated to provide its customers.

One annual determination is BPA's total annual power sales contract obligation to customers. BPA's subsection 5(b) and (d) obligations are the basis for this determination and affect certain operational and planning determinations BPA makes during an operating year. BPA makes a determination of the planned changes in its electric power firm requirements load obligations for its federal agency and public agency or investor owned utility customers for the upcoming year. BPA also makes a determination of the operating levels its DSI customers

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<sup>1</sup> For federal agency loads, BPA also serves these loads net of any resources or power purchases from other sources available to the federal agency.

have requested during the year. This information goes into BPA's planning for operation of federal generation and power purchases during the year.

Annually BPA also makes a multiyear planning determination of its firm and peak load obligations and available resources and purchases. Utility customers may increase or decrease their firm power loads (peak or energy) by giving notice to BPA. Under their contracts the customers provide seven years' planning information of their estimated load requirements and resources to serve firm loads. BPA uses this information in its multiyear (10 and 20 year projections) loads and resources planning. DSI loads are planned, based on industry information and any anticipated changes in loads, and then are included in BPA's long-term planning.

Based in part on these determinations, BPA plans its long-term resource acquisitions of various resources in order to be assured of having adequate firm power available to meet its contractual obligations. BPA cannot build, own, or construct its own resources but may acquire the capability of resources made available to it. 16 U.S.C. 839a(1). Any acquisition must be consistent with provisions of subsections 6(a)(1) and (2) of the Northwest Power Act. 16 U.S.C. 839d(a)(1)&(2).

BPA makes two other determinations under section 5 of the Northwest Power Act that are affected by any subsection 9(c) determinations. First, under subsection 5(b)(5) the Administrator must determine whether or not BPA can be assured of acquiring sufficient resources to meet its public agency firm requirements loads on a planning basis. If the Administrator determines that BPA may not be able to acquire sufficient resources in the future to meet its loads, then consistent with this provision and subsection 5(b)(6), BPA may declare an "insufficiency" for a specified period and restrict BPA's contractual obligations to meet its customers' section 5(b) firm power load requirements for that period. 16 U.S.C. 839c(b)(5)&(6). Second, BPA annually determines the extent to which BPA may have electric power in excess of its firm power requirements load obligations on both an annual operating year and a multiyear planning basis. Under subsection 5(f) of the Northwest Power Act, BPA may sell such excess electric power, if any is available, as surplus power to BPA customers either within or outside of the Pacific Northwest region, consistent with the requirements of BPA statutes. 16 U.S.C. 839c(f).

### **III. Subsection 9(c) of the Northwest Power Act**

#### **A. General overview of subsection 9(c) terms**

Subsection 9(c) provides in pertinent part:

The Administrator shall in making any determination, under any contract executed pursuant to subsection 5, of the electric power requirements of any Pacific Northwest customer, which is a nonfederal entity having its own generation, exclude, in addition to hydroelectric generated energy excluded from such requirements pursuant to subsection 3(d) of such Act (16 U.S.C.



837b(d)), any amount of energy included in the resources of such customer for service to firm loads in the region if (1) such amount was disposed of by such customer outside the region, and (2) as a result of such disposition, the firm energy requirements of such customer or other customers of the Administrator are increased. Such amount of energy shall not be excluded, if the Administrator determines that through reasonable measures such amount of energy could not be conserved or otherwise retained for service to regional loads. The Administrator may sell as replacement for any amount of energy so excluded only energy that would otherwise be surplus. 16 U.S.C. 839f(c)(emphasis added).

The Northwest Power Act redefined BPA's obligation to provide electric power service to its customers for their firm electric power requirements load.

### **1. BPA's net electric power requirements obligations**

Under subsection 5(b)(1), BPA would be obligated to serve a customer's load net of the firm resources the customer decides to "dedicate" to serve such loads. BPA meets these firm loads by using existing resources or by acquiring additional resources consistent with section 6 of that Act. Customers would determine what resources they will apply to serve their own loads, if any, and BPA would supply the difference. BPA is not obligated to serve that portion of its customers' loads served by the customers' own resources.

A utility customer with its own resource may (1) dedicate it to serve its firm power load in the region; (2) sell the power to another Pacific Northwest utility for service to that utility's regional load; (3) use the resource on its own system to serve its out of region loads; (4) sell the power to BPA if BPA is purchasing resources that will serve regional load; or (5) sell the power to another entity for delivery to loads out of region.

### **2. Application of "region" to resources covered by subsection 9(c)**

In all cases, a utility customer's resource choices are affected by the definition of "region" as applied to the interpretation of subsection 9(c). The Northwest Power Act defines the region and those loads served by BPA or a customer that are within the region as regional loads. Subsection 3(14) states:

Pacific Northwest, "region", or "regional" means-

(A) the area consisting of the States of Oregon, Washington, Idaho, the portion of the State of Montana west of the Continental Divide, and such portions of the States of Nevada, Utah, and Wyoming as are within the Columbia River drainage basin; and

(B) any contiguous areas, not in excess of seventy-five air miles from the area referred to in subparagraph (A), which are a part of the service area of a rural electric cooperative customer served by the Administrator on the

effective date of this Act which has a distribution system from which it serves both within and without such region. 16 U.S.C. 839a(14).

Regional loads as referred to in section 9(c) of this Act are those loads within the Pacific Northwest served by a BPA customer.

BPA interprets this definition and subsection 9(c) as not requiring BPA to make a 9(c) determination for those resources a customer uses to serve its own out of region firm power loads. A utility's use of its own system resources to serve its own loads does not constitute an export out of region of the resource or a sale, exchange or other disposition of electric power to another entity out of the region under subsection 9(c) and (d) of the Northwest Power Act or subsection 3(d) of the Act of August 31st, 1964, P.L. 88-552, (the Northwest Preference Act). A utility's application of its own resources to meet its own system loads that it has a utility responsibility to serve, are matters for the utility's board and regulators to address.

However, sales, exchanges or other disposition of electric power by a customer to another entity outside the region is covered under subsection 9(c). If customers choose to export their resources rather than dedicate them to serve their own firm loads, or let BPA acquire them for service to its customers' regional firm loads, then subsection 9(c) specifies how BPA is to treat such exports for its firm load requirements determinations. Subsection 9(c) requires BPA to make a determination of the result an export of an entity's resource will have on BPA's firm load service obligation to the exporting utility and its obligations to serve regional firm load of other BPA customers. BPA then incorporates all 9(c) determinations when it makes its annual and multiyear determinations of that customer load as discussed above.

### **3. Subsection 9(c) is not a prohibition on customer resources exports, but exports are reviewed under subsection 9(c)**

Importantly, subsection 9(c) does not prohibit a customers' export of any power from its resources out of the Pacific Northwest region. Subsection 9(c) does not limit the number or type of export transactions that a customer may make of its resources. A customer may export any of its resources by a sale, exchange, or other disposition out of the region, even if those resources are "dedicated" to serve its own loads or the loads of other customers in the region under subsection 5(b)(1) contracts. Subsection 9(c) only requires BPA to exclude an amount of energy from BPA's firm electric requirements obligations when the customer's export sale, exchange or other disposition of electric power out of the region meets certain statutory considerations.

The Administrator excludes any amount of power that is included in a customer's resources dedicated to serve any firm loads in the region if three statutory considerations are met. First, an amount of power is disposed of outside the region by the customer. Second, as a result of disposing of a resource out of region, the firm energy requirements of that customer or any other BPA customer are increased. Third, the Administrator may not exclude that amount of power if the Administrator determines further that the power "could not be conserved or otherwise retained for service to regional loads." Thus, the determination required by

subsection 9(c) of the Administrator is that (1) an amount of power from the customer's resources available to serve regional load was exported by the customer out of region; (2) that customer's firm energy requirements or the requirements of any other BPA customer may be increased as a result of the export; and (3) that such amount of energy could not by reasonable means be either conserved or otherwise retained for service to regional load.

#### **4. The type of resource exported is also considered**

In addition, the Administrator must consider the type of resource producing the energy to be exported; i.e., the Administrator must consider whether the power is produced from a hydroelectric resource or from another source. Subsection 9(c) refers to subsection 3(d) of the Northwest Preference Act. 16 U.S.C. 837c(d). This 1964 provision is applicable to a customer's hydroelectric resources. Subsection 9(c) states:

The Administrator shall . . . exclude, in addition to hydroelectric generated energy excluded from such requirements of any Pacific Northwest customer pursuant to subsection 3(d) of such Act (16 U.S.C. 837b(d)), any amount of energy included in the resources of such customer for service to firm loads in the region . . . .

Subsection 3(d) of the Northwest Preference Act states:

The Secretary, in making any determination of the energy requirements of any Pacific Northwest customer which is a non-Federal utility having hydroelectric generating facilities, shall exclude any amounts of hydroelectric energy generated in the Pacific Northwest and disposed of outside the Pacific Northwest by the utility which could have been conserved or otherwise kept available for the utility's own needs in the Pacific Northwest. The Secretary may sell the utility as a replacement therefor only what would otherwise be surplus energy.

Thus, a customer that is a utility has its hydroelectric generation evaluated under subsection 3(d). Utility customers' other resources and resources of nonutility customers will be evaluated under subsection 9(c) and would include all other resources, e.g., thermal generation, renewable resources and any hydroelectric resources of a nonutility customer.

If an amount of energy is excluded from the Administrator's obligations to the exporting customer, the Administrator is then authorized to sell to the customer as replacement for the exported energy only Federal power that would otherwise be surplus. 16 U.S.C. 839f(c).<sup>2</sup>

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<sup>2</sup> Subsection 9(c) defines surplus energy and surplus peaking capacity:

the term 'surplus energy' shall mean electric energy for which there is no market in the Pacific Northwest at any rate established for the disposition of such energy, and the term 'surplus peaking capacity' shall mean electric peaking capacity for which there is no demand in the Pacific Northwest at the rate established for the disposition of such capacity.

**B. Subsection 9(c) does not apply to BPA's determinations of electric power requirements under section 5 contracts for certain types of firm power requirements service**

All contracts executed pursuant to section 5 have determinations of "electric power requirements," including BPA's power sales contracts with preference agencies, investor-owned utilities and federal agencies under subsection 5(b). Subsection 9(c) does not apply to certain BPA obligations to provide service to certain purchasing classes of customers. For example, subsection 5(b) contracts with federal agencies are excluded by the language in Subsection 9(c) which states, "of any Pacific Northwest customer, which is a non-Federal entity having its own generation. "BPA's federal agency customers in the Pacific Northwest are thereby excluded.

This same phrase excludes another group of BPA customers: those customers that have no electric power generation of their own. Under current contracts, utility customers that do not have resources and who are purchasing on a metered, or full, requirements basis, have all of their firm power service provided by BPA. Their small resources, if any, are exchanged with BPA and not sold or disposed of on the open market. Since such customers do not have power from resources to sell for export, no export occurs. BPA's determinations of their electric power requirements are not affected by the application of subsection 9(c).

Sales to direct service industrial customers under subsection 5(d) are not included for several reasons. First, BPA sells power to those customers for direct consumption only and not for resale of that federal power. Resale of DSI power out of region is not permitted under the terms of the present contract and would be inconsistent with the statutory use identified for such a sale (direct consumption). Second, the initial subsection 5(d)(1) contracts with the direct service industries have a limitation on the amount of power BPA may provide to these customers. The amount of power BPA may sell under these contracts is based on "an amount equivalent to that which the customer is entitled dated January or April of 1975 for the sale of 'industrial firm power'." 16 U.S.C. 389c(d)(1). Third, direct service industries do not participate on the wholesale power export market as sellers of firm power.

Because BPA's obligation to provide firm power cannot exceed a specified amount and because there is no right of a direct service industrial customer to "export" any federal power sold to it, BPA's determination of its electric power requirements for service to these customers is not affected by any export. If the terms and conditions of BPA's firm power

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The language of subsection 9(c) of the Northwest Power Act and Northwest Preference Act subsection 3(d) both contain the limitation that BPA can only sell to the exporting utility power that would otherwise be surplus power if BPA has determined that the export meets the conditions for excluding an amount of power from BPA's firm obligations. BPA reads this provision of subsection 9(c) and Northwest Preference Act subsection 3(d) regarding the replacement of exported power by surplus energy and capacity as having the same meaning.

service to the direct service industries were to change substantially under later contracts, BPA would have to reevaluate the application of this statutory interpretation to its redefined obligations to such customers.

BPA's utility customers with generating resources on their systems are the customers whose firm power load requirements may be affected by BPA's subsection 9(c) determinations. These customers include BPA's partial requirements public agency customers and investor owned utility customers. Such customers have dedicated a portion of their own resources to serve their regional load. BPA's present and future electric power requirements obligation to serve these customers' firm power load is determined by their resources dedicated to serve their own firm load and other Pacific Northwest customers' firm loads.

**C. Subsection 9(c) applies to any resources of a customer that are available for service to regional load**

Subsection 9(c) applies to BPA's determination of electric power requirements for those customers with their own resources. Primarily these customers are retail utilities, either investor-owned or public agency utilities that have developed resources and participate in the wholesale export power market. Some or all of these customer's resources may be designated to serve part or all of their firm power requirements load in the region under their power sales contracts. Designation of resources to serve regional firm power requirements load affects BPA's firm load obligation because BPA serves all customers' loads net of their dedicated resources.

The relationship between BPA's obligation to serve its customers' firm loads and the availability of customer resources to serve firm load, is set forth in subsection 5(b)(1):

Whenever requested, the Administrator shall offer to sell to each requesting public body and cooperative . . . and to each requesting investor owned utility electric power to meet the firm power load of such . . . utility in the Region to the extent that such firm power load exceeds-

- (A) the capability of such entity's firm peaking and energy resources used in the year prior to the . . . Act to serve its firm load in the region, and
- (B) such other resources as such entity determines, pursuant to contracts under this Act, will be used to serve its firm load in the region.

In determining the resources which are used to serve a firm load, for purposes of subsections A and B, any resources used to serve a firm load ;under such subparagraphs shall be treated as continuing to be so used, unless such use is discontinued with the consent of the Administrator, or unless such use is discontinued because of obsolescence, retirement or loss of resource or loss of contract rights. 16 U.S.C. 839c(b)(1).

This provision contains several directions regarding the resources a utility can apply to its firm power load in the region. First, the subsection differentiates between the peaking and energy

resources that may be applied to the load. Second, two classes of resources are identified for service to regional loads: resources used in the year prior to the Northwest Power Act to serve a utility's firm load, and other resources that the utility designates to serve its load under its contract with BPA. 16 U.S.C. 839c(b)(1)(A) &(B).

The Northwest Power Act defines "resource" as "electric power, including the actual or planned capability of generating facilities, or actual or planned load reduction resulting from direct application of a renewable energy resource by a consumer or from a conservation measure." 16 U.S.C. 839a(19). A customer's resources may be hydroelectric or thermal generation (coal, nuclear, gas turbine, etc.), renewable, or others. A customer wishing to serve its firm load under section 5 can dedicate future planned resources as well as existing customer resources.

Additionally, BPA has interpreted subsection 5(b)(1)(A)&(B) utility resources to include a firm power purchase contract with another entity. The last sentence of subsection 5(b)(1) refers to contractual rights to purchase power as a resource that may be lost for service to load. It is reasonable that such resources may be applied by a customer to serve its firm power load as a dedicated resource.

When a customer dedicates a resource to serve a portion of its loads, BPA does not have the obligation to provide or plan for service for that portion of the load. Once a customer dedicates a resource, it remains dedicated to serve the load unless a specifically identified event occurs. 16 U.S.C. 839c(b)(1). Note that an export out of region of a resource by a customer is not an event that discontinues the dedication of the customer's resource to serve its firm load.

#### **D. The Administrator's determination under subsection 9(c) is a factual determination**

The Administrator's 9(c) determination may affect the contract obligations of BPA to provide firm power requirements service to certain customers participating in the extraregional firm power market. The determination is whether a particular extraregional sale, exchange, or disposition of an amount of power from a customer resource, available for service to firm load in the region, will result in an increase in the Administrator's firm energy requirements for that customer or any other regional customer. It is a factual determination. If the determination is negative, then BPA will not exclude an amount of power equal to the export from its firm power requirements for the exporting customer. If the finding is positive, then the additional facts of whether the power could have been retained or conserved for service to regional loads by reasonable means, must also be determined. The Administrator's determination must also distinguish between a hydroelectric generating resource under subsection 3(d) of the Northwest Preference Act and other resources.

A customer's electric power requirements under its section 5 contract with BPA establishes BPA's obligation to provide firm power to serve the customer's load net of its resources. BPA must determine what the effect upon its load obligations and other loads served by its

customers will be, given the loss of an amount of power available to serve load in region due to an export of that power out of region. Currently, BPA's contracts permit a customer to place additional firm power loads on 7 years' notice or upon the occurrence of certain specific events, like loss of a dedicated resource. BPA's load obligation to serve its electric power requirements is not static and can change upon the choice of the customer to request additional firm service from BPA. BPA's evaluation of any proposed changes in its obligations is based on its information on loads and resources, anticipated changes in economic conditions and other facts as discussed below. In making its factual determinations BPA applies the following meaning regarding the conditions expressed in subsection 9(c).

### **1. Disposition of an amount of energy outside the region by a customer**

The first step in a 9(c) factual determination is whether a customer has exported an amount of energy from its resources out of region.<sup>3</sup> Subsection 9(c) states its first condition as follows: "if 1) such amount was disposed of by such customer outside the region, . . ." 16 U.S.C. 839f(c). The terms "outside the region" as previously discussed have a specific meaning in that the term "region" is defined by the Northwest Power Act. For the reasons stated above, BPA does not evaluate its customer's service to its own extraregional loads as an export. For transaction between Northwest customers and other nonregional entities, BPA has considered any contracts which include terms for delivery of power at the points of interconnection of BPA's Intertie with California (COB), Nevada (NOB), British Columbia (Blaine), and eastern Montana, as points of delivery for export.

The terms "disposed of" means the transference of ownership, use or title to the power from the regional customer to an extraregional entity. The specific mechanisms may include sales, assignments, exchanges, or other contractual arrangements. However, not all forms of dispositions necessarily result in a disposition of power outside the region. Specifically certain types of exchanges, like seasonal exchanges, may not result in a disposition outside of the region because the power is returned to the Northwest. Those exchanges which result in no

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<sup>3</sup> As part of its past practice in implementing subsection 9(c), BPA has on a case-by-case basis requested information from a customer on a proposed export sale or exchange transaction with an extraregional entity. When a customer requests use of BPA's Intertie transmission system to facilitate the delivery of power sold to extraregional entities, identifying the details of the export becomes part of a negotiation for the provision of that service. In these circumstances BPA can readily obtain information on the export proposed by a customer.

However, transactions that occur over transmission facilities not operated by BPA do occur, primarily for regional investor-owned utilities. BPA has generally not made any subsection 9(c) determination regarding these exports for two reasons. First, both Portland General Electric Co. and PacifiCorp are owners of the transmission and do not request the use of federal transmission to complete their transactions. Second, neither of these utilities have placed any firm power load upon BPA under their requirements power sales contracts. In effect, there is no electric power requirements served by BPA for these utilities against which BPA would reduce the amount of its power service equal to their exports (assuming the conditions of subsection 9(c) so required). If these customers choose to place firm requirements loads on BPA, then BPA would have to make a determination regarding their exports, just as it does for its customers that do place firm power loads on BPA.

net power loss in any operating year, i.e., the extraregional entity will return at least as much power to the Northwest customer as was earlier delivered to it, will not be considered as dispositions which result in a net export of power out of the region. These exchange types of dispositions are further discussed in the attached policy. Non-Federal Participation Capacity Ownership Contract and Section 9(c) Policy, Record of Decision, at 11.

BPA interprets the terms "by such customer" to mean any customer, participating in the extraregional firm power market, that has resources that it either owns or purchases the output thereof from others. "Customer" is a term defined by the statute as "anyone who contracts for the purchase of power from the Administrator pursuant to this Act." 16 U.S.C. 839a(7). Customer would also include any subsidiary, any agent, assignee, delegatee, broker or other entity which is disposing of power or resources for a customer on the wholesale market whether or not such agent, assignee, delegatee, broker, or entity is a customer of Bonneville.

Also, "customer" would include any other entity that the customer owns, controls, in whole or in part or is controlled by the customer, and any entity that is controlled by those controlling the customer, or of which the customer is a member. Thus, any generation subsidiary, or any agent acting for the customer in providing power or selling power, is included within the ambit of this provision. If the customer is a member of any state joint operating agency (JOA) or other association providing resources to its members, and the customer belongs as a member with the right to receive power from projects of that entity, then the resource or portion thereof available to the customer will be considered part of the customer's resources to the extent of its participation. If a customer is not a member of a JOA or other association, but uses the JOA or association to accomplish an export of resources, the export will be attributed to the customer with the JOA or association acting as agent for the customer for the purpose of exporting the resource.

BPA's determination under this part of the 9(c) test is to establish factually that an export of nonfederal power took place by or on behalf of a customer in a specified amount and for a specified duration. To facilitate this finding, BPA requires any customer making an export inform BPA of the general terms and conditions of the proposed transactions prior to concluding final contracts with an out-of-region entity. Only by being informed of proposed export transaction can BPA have the factual basis necessary to make the determinations required by this subsection.

BPA interprets the terms "such amount" in this phrase as a reference to the antecedent terms "any amount of energy included in the resources of such customer for service to firm loads in the region in the preceding phrase." To define "such amount," BPA must define both portions of this preceding phrase. BPA reads "amount of energy," to mean the amount of power exported and potentially excluded from its electric power requirements. BPA interprets these two terms to refer to and mean the same thing, that is, an amount of power that is subject to the stated conditions and which, if the conditions are met, is to be excluded from BPA's firm load obligation.



BPA believes that both peaking energy and electric energy are included in the terms "any amount of energy" and "such energy". The Northwest Power Act defines electric power as "electric peaking capacity, or electric energy, or both." 16 U.S.C. 839a(9). BPA's contractual obligations under section 5 include supplying both electric peaking energy (capacity) and electric energy for its customers' firm load requirements. Further, a customer may designate peaking and energy resources under subsection 5(b)(1) in differing amounts for service to its firm loads. For these reasons the above phrases apply to firm power and not just firm energy in BPA's determinations under subsection 9(c). Additionally, this interpretation coordinates these terms with subsection 5(b)(1) that uses the term "electric power" to meet firm power loads of customers in defining the Administrator's obligation under its contracts. Both electric peaking capacity and electric energy are needed in order to provide continuous service to a customer's firm power loads.

Thus, BPA reads the term "energy" to be used in its generic sense of electric power when used in this subsection and to mean both electric peaking capacity and electric energy for purposes of a 9(c) determination. BPA recognizes that a customer may differentiate between the peaking capacity it dedicates to its firm loads from the firm energy portion of its resources dedicated to firm load under subsection 5(b). This interpretation is not intended to prevent that differentiation nor to require that uniform amounts of energy and capacity from the same resource be dedicated to firm load service by the customer.

Support for this interpretation is found in the legislative history of both subsection 5(b) and subsection 9(c). For example, the Senate Energy Committee report in discussing subsection 5(b) states:

This subsection sets forth the manner in which firm resources of individual customers are to be determined. For purposes of that determination, the term "firm power load" is intended to mean the power a customer is obligated to make continuously available to its purchasers . . . , and the term firm resources is intended to mean the electric power suitable for providing service to firm power loads. S. Rep. No. 272, 96th Cong., 1st Sess. (1979), p. 26.

The same report states regarding subsection 9(c):

In addition, the Administrator's obligations to meet a customer's firm power load requirements will be limited if that customer disposes of a portion of its own resources outside the region and thereby increases its or another customer's firm power purchases from the Administrator. S. Rep. No. 272, 96th Cong., 1st Sess. (1979), p. 34.

This basic precept of BPA service to a customer's firm load in the region and its description of firm resources which could be applied to firm load service in the region or exported, remained unchanged in the Act.

The House Interior Committee's report does not differ. It states:

Subsection 5(b)(1) requires BPA to offer to sell to each requesting utility the power needed . . . to meet its firm load within the region in excess of the utility's own firm resources, and specifies the method of determining the utility's own firm resources. This subsection also clarifies that firm energy and firm peaking resources of a utility may differ and that the firm energy associated with the firm peaking component of a resource is the firm energy produced in the peaking use of that resource. H. Rep. No. 976, 96th Cong., 2d Sess., Part II (1980), pp. 46-47.

Thus firm resources may be specified by their individual components, firm energy and firm peaking energy (capacity) by the customer in identifying the firm resources which it will apply to its firm load. This explanation confirms that the firm peaking capacity of a resource is the firm peaking energy component of that resource.

## **2. Power which is included in the resources of a customer for service to firm loads in the region**

Next, BPA must determine those customer resources from which an exclusion may be made. BPA reads the terms "included in the resources of such customer for service to firm loads in the region" together with the next to the last sentence of 9(c). That sentence states, "Such amount of energy shall not be excluded if the Administrator determines that through reasonable measures such amount of energy could not be conserved or otherwise retained for service to regional loads." In subsection 9(c), Congress addressed power from a customer's resources that is available for service to the customer's own regional firm load and the firm load of other customers in these provisions. The terms "firm loads in the region" and "to regional loads" are broader than just the dedication of a customer's resources to its own loads. A customer's resources that had been sold to another regional customer for service to its regional loads would also be included. Thus, any resource that a customer dedicates under subsection 5(b)(1) for service to its loads, and any resource of a customer that was sold to another customer and dedicated for service to that customer's firm load in the region, is covered by this subsection.

Put another way, BPA reads subsection 9(c) as asking not only whether the exporting customer had dedicated the power from its resource to serve its own load, but also whether power from a resource was available through purchase or other disposition to any other regional customer for dedication to that other customer's loads. This broader reading is consistent with the test stated in subsection 9(c) of whether the export of power from a resource would "result in an increase in BPA's firm obligation of that customer or any other customer." It is also consistent with the test of subsection 9(d), 16 U.S.C. 839f(d), of whether the export would increase the amount of firm power the Administrator is obligated to provide to any customer.

When a customer withdraws a firm resource it previously sold to another customer, and the resource was dedicated to that other customer's firm load, the customer's export of its resource could result in an increase in BPA's firm load obligation to that other customer. The loss of a resource, or of contract rights, gives rise under subsection 5(b)(1) to an increase in BPA's obligation to "pick-up" that portion of firm load served by the lost resource. Only if the customer losing the firm resource had another firm resource that was otherwise uncommitted and available to serve the same firm load, would the withdrawal of the resource not automatically result in an increase in BPA's firm obligation to the losing customer under subsection 5(b)(1).

However, not all resources developed by customers fall into the ambit of subsection 9(c). If a customer develops a resource solely for export and not in anticipation of service to present or future firm load, then the export of power from such a "market" resource would not be within subsection 9(c). Any power from the resource would not be included in resources for service to any customer's firm loads in the region.

In order to consider a resource within this category, BPA must have a finding from the regulatory body having jurisdiction over the customer that the resource was not developed for service to load but only for export. If there is no regulatory body having jurisdiction over the customer, BPA must have a demonstration from the customer that (1) the resource has not been used to serve any firm load of any customer in the region at any time; (2) the resource is not anticipated to be used to serve the customer's planned or forecasted firm power load increases, and such loads will be met by other resources, exclusive of firm power purchases from BPA; and (3) the customer is properly authorized under law to invest in, construct, develop, and sell or otherwise dispose of power from a resource which will not be used for service to its firm load. Because resources within this category are excluded from review, the above demonstration is necessary to avoid a result that BPA's load obligation would be increased due to such resources being exported and unavailable for service to Northwest firm load.

### **3. The Administrator's electric power load requirements are increased as a result of the disposition out of the region**

The second condition for application of this provision is stated: "as a result of such disposition, the firm requirements of such customer or other customers are increased." After establishing that a disposition out of region has or will occur, BPA asks what the consequence of that action by a customer will be on BPA's firm power load obligations to all of its customers. BPA must look at both the effects upon the exporting customer's firm power load requirement and the effect upon the firm power requirements of its other regional customers.

Again, this determination is a factual one. BPA bases it upon its own information on BPA's current and planned firm load obligations; its resources; customer's rights to place additional load upon BPA under their firm requirements power sales contracts; its customer's own load and resource planning for those loads which BPA is not serving; and other information on available sources of power supply.

BPA reads the terms "firm requirements of such customer or other customers" to mean BPA's obligation to provide firm power to serve its customers' firm power loads, not requiring any hourly real time operational monitoring of such transactions. Rather, BPA reads this provision as calling for a determination of how its *planned* loads for the next several operating years may change. BPA's planning is based on various notice periods and resource addition assumptions applicable under subsection 5(b) contracts to changes in BPA's firm power load obligations. Currently, notice periods under BPA requirements contracts permit a customer to place an additional firm power load obligation upon BPA in 6 months to 7 years depending upon the specific circumstances involving a change requested by the customer. Considering such periods, BPA's subsection 9(c) determination would address likely changes that may result from an export in a time frame covering the next operating year out to 10 years, BPA's current loads and resources planning horizon.

BPA reviews information available to it and others regarding the load and resource balance of BPA customers in the region within the applicable period. BPA would analyze its own planning information as updated and that data available from sources like the public utility commissions of the states, information on planned resources of independent power producers, and least cost planning of utilities. Part of BPA's consideration would include the following facts and their likelihood of occurrence.

A customer could choose to increase its load requirement on BPA or develop or purchase another resource that was at the same cost or less than what BPA would charge for service. If there are sufficient nonfederal resources available when the load change would occur, and those resources are within a reasonable range of cost, then the disposition of an amount of power from a customer's resource out of region may not be likely to increase BPA's obligation to that customer or another due to availability of alternative, reasonable cost resources. In such cases, other factors may affect the likelihood that an export of a resource may result in an increase in BPA's firm power load obligation, but generally it would be small.

Conversely, if few nonfederal resources are available at a cost close to what BPA may charge for service to the customer's firm load, then the likelihood of BPA's firm power requirement obligation of that customer or another may become high. Transmission considerations may affect the choices a particular utility makes in whether BPA would serve its load or another supplier would. The export may then result in BPA having an increase in its firm load obligation. In addition, BPA would look to other information about the specific resource, such as whether the resource had been previously dedicated to serve the loads of another customer, but then was withdrawn by the owner and exported.

When a resource has been sold by the customer owner to another regional customer of BPA, and applied to that customer's load, BPA will consider that sale the loss of the second customer's contract right to a resource which would result in an increase in BPA's obligation to the second customer for two reasons. First, the resource was dedicated to serve a utility's firm power load in the region. Second, the loss of contract right to a resource that has been dedicated to firm load by a customer results in a discontinuation of service from that resource

under subsection 5(b)(1) such that BPA then has an obligation to serve the load formerly served by the resource.

Customer resources that are dedicated to serve a customer's load under subsection 5(b)(1) by the customer, if exported, will be considered to result in an increase in BPA's firm electric power obligation to that customer. Under subsection 5(b)(1) a customer's resource dedicated to serve its load remains dedicated unless one of the events enumerated occurs. Only if the Administrator has consented to the withdrawal of the resource from service to the customer's requirements load, can a customer then export the formerly dedicated resource. The other enumerated conditions for discontinuation of a dedicated resource do not make any power from the resource available to the customer for export, since those events describe the loss of the resource, generation or power. BPA has previously stated a policy and interpretation of subsection 9(c) that BPA would reduce its firm power load obligation to any customer that exported power from a resource that was dedicated to serve load in the region during the time of the export. *See* attached letter from H. Spigal, BPA to J. Walsh, Montana Power Company, dated October 21, 1983.

When BPA does its review of regional loads and resources, BPA will consider additional factors, such as, the amount of power proposed to be exported, the duration of the proposed export, whether the disposition is a sale or a seasonal exchange, whether there is a contractual right to terminate power deliveries to the out of region customer, or to terminate the transaction on notice, and other relevant terms, conditions or circumstances as BPA in its discretion decides must be considered. BPA's determination is not a guarantee that its firm power load obligation to an exporting customer or other customers will not increase, but is a reasonable projection based upon information readily available to BPA at the time it makes its determination, of whether an increase in BPA's firm power load obligation of the exporting customer or any other customer is not likely to occur as a result of the export.

The above discussion of information and probability is applicable to those nonutility hydroelectric resources and other thermal resources as discussed above. The standard differs from the standard applicable to utility customer's hydroelectric resources exported from the region. This latter standard is set forth in subsection 3(d) of the Northwest Preference Act and is discussed below.

**4. BPA will not reduce its obligation if the power exported could neither be conserved nor retained for service to regional loads through reasonable measures**

The second to the last sentence in subsection 9(c) states an exception to reducing a customer's firm power requirement even if the first two conditions are met. The Administrator must determine if the power exported could have been conserved or otherwise retained for service to regional loads by reasonable measures. If the answer is that the power exported could not have been conserved or retained, then the customer would not have its electric power requirement reduced by the export when BPA makes its other determinations. If the power could have been conserved or retained by reasonable measures, then BPA would reduce the

electric power requirements of the exporting customer by the amount and duration of the export.

For purposes of its determination under subsection 9(c), BPA reads the phrase "reasonable measures" to mean those actions, contracts, or other arrangements which a prudent utility would take to ensure reliable service and efficient use of its resources consistent with a one utility concept for operating Pacific Northwest utility systems. Extraordinary or highly unusual actions are not within the scope of this phrase. BPA would not anticipate that a customer must undertake such actions. Usual and customary actions or agreements to maximize efficient reliable use of regional resources to meet regional load includes making the resources available to other Northwest customers and application of generation to existing and future loads of a customer. The arrangements to accomplish this task are those which Northwest utilities have used. Thus, reasonable measures which would conserve or retain power from a resource for service to Northwest loads would include, but not be limited to (1) using the power for service to existing orphaned load of the customer; (2) using system storage or obtaining storage off system; (3) using the resource for economic displacement of the utility's other resources, or deferral of more expensive fuel purchases or power purchases; (4) offering to sell or exchange resource output to other regional customers for use in their load or for displacement of their less economical resources or fuel purchases; and (5) making seasonal exchange or storage arrangements with extraregional systems.

BPA interprets the term "conserve" to mean not to waste, to preserve from loss or keep. Conservation of electric power from a thermal generating plant may include measures or actions different from those appropriate for a hydroelectric generating plant. A utility system that has both types of resources may have available additional resource coordination actions that could conserve the power proposed to be exported. Such coordinated actions may not be available to utilities with only single resources or one type of resource. Similarly, the term "retain for service to regional loads" is interpreted to include a range of activities, some of which are mentioned above.

Some utilities may not have available to them the same range of actions that others do because of particular differences in their systems. All should be able to take the actions noted above. The appropriateness of any particular measure will depend in part upon the type of resource and in part the type of system that exports the power. These are reasons why BPA must be able to identify the specific resources supporting a particular transaction exporting power out of the region. It is also why a customer's system sales that fail to identify the resources used will be treated as exporting power that is either hydroelectric energy or power that may be capable of being retained for service to regional loads.

BPA interprets the phrase "otherwise retained for service to regional load" to mean more than that a customer only need look to how it may utilize a resource to serve its own loads. The use of the term "regional" as a descriptor of loads means that the utility has a responsibility to offer or make the resource available to other customers within the region before it seeks to export the power out of region. Without this step, power from regional resources that would otherwise either be dedicated to serve Northwest loads, or used to create additional system

efficiencies in serving regional loads, would be lost to the region. This interpretation is consistent with the definition of region in the Northwest Power Act. "Regional" is a defined term under subsection 3(14) of the Act, and BPA will apply that definition to the loads covered by this subsection when reviewing an exporting utility's request under this subsection. 16 U.S.C. 839a(14). Additionally, this interpretation is consistent with the language in preceding sentence of subsection 9(c) that directs BPA to consider not only increases in the firm power requirements of the exporting customer but also any increases in any other customer's firm power requirements in the region.

**E. Consideration of utility hydroelectric resources under subsection 9(c) of the Northwest Power Act and subsection 3(d) of the Northwest Preference Act**

As part of BPA's determination of its firm load obligations when a customer proposes to export electric power from a resource, BPA must first consider whether the power comes from the operation of a hydroelectric resource. Subsection 9(c) provides that the Administrator would exclude from a customer's electric power requirements, firm power exported from nonhydroelectric resources if certain conditions are met. These exclusions are in addition to hydroelectric generated energy excluded from such requirements pursuant to subsection 3(d) of the Northwest Preference Act. Subsection 3(d) applies to exports of hydroelectric resources by BPA utility customers. It provides in pertinent part:

The Secretary, in making any determination of the energy requirements of any Pacific Northwest customer which is a non-Federal utility having hydroelectric generating facilities shall exclude any amounts of hydroelectric energy generated in the Pacific Northwest and disposed of outside the Pacific Northwest by the utility which, through reasonable measures, could have been conserved or otherwise kept available for the utility's own needs in the Pacific Northwest. 16 U.S.C. 837b(d).

BPA interprets this provision to apply to the Administrator's determinations of the energy requirements of a Pacific Northwest utility customer as defined in subsection 1(f) of the Northwest Preference Act. A utility's energy requirements include BPA's requirement obligation to provide firm power to the utility under its subsection 5(b)(1) contract with BPA. To the extent that BPA provides electric power to meet the utility customer's firm power requirements load, those "electric power requirements" under the Northwest Power Act subsection 9(c) are included in the definition of "energy requirements" under subsection 3(d) of the Northwest Preference Act.<sup>4</sup> Thus, BPA's 5(b)(1) firm power load obligation to its

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<sup>4</sup> Subsection 1(f) of the Northwest Preference Act provides: "Energy Requirements of any Pacific Northwest customer "means the full requirements for electric energy of (1) any purchaser from the United States for direct consumption in the Pacific Northwest, and (2) any non-Federal utility in that region in excess of (I) the hydroelectric energy available for its own use from generating plants in the Pacific Northwest, and (ii) any additional energy available for use in the Pacific Northwest which, under a then existing contract, the utility (A) can obtain at no higher incremental cost than the rate charged by the United States, or (b) is required to accept."

utility customers would be reduced under subsection 9(c) if there is an export of hydroelectric energy that meets the conditions of subsection 3(d).

Second, the standard stated in subsection 3(d) differs from the standard expressed in subsection 9(c). Subsection 3(d) directs BPA to exclude amounts of hydroelectric energy disposed of outside the Pacific Northwest by the utility, if the energy could have been "conserved or otherwise kept available for the utility's own needs in the Pacific Northwest by reasonable measures." BPA applies the same meaning to the terms "reasonable measures", "conserve", and "otherwise kept available" under both subsections 3(d) and 9(c). "Conserve" means to save for use or keep from loss. "Otherwise kept available" means to retain the use of the energy on the utility's system for application to load. "Reasonable measures" include the types of actions noted above, including arrangements for or use of storage, economical displacement of other resource with higher operating costs than hydro, agreements with other systems for the exchange of hydropower that make the power available to the utility during peak load periods, etc.

However, this standard does not include a requirement that a utility offer to sell its hydroelectric energy to another Northwest customer in order to retain the energy for service to Northwest loads. This statutory requirement is in subsection 9(c) of the Northwest Power Act. BPA interprets these two provisions to be consistent with each other. Subsection 3(d) of the Northwest Preference Act addresses a subset of BPA customers and a subset of their resources, that is, utility customers and their hydroelectric resources. Conversely, subsection 9(c) of the Northwest Power Act addresses all other customers and all other resources. The subsection 9(c) reference to a utility's "generation" is not exclusive of hydroelectric energy of a utility customer and would include hydrogeneration of nonutility customers. If such hydroelectric power could be sold to other Northwest customers for service to their loads, then it would be energy that could have been retained for service to regional load by reasonable measures, e.g., a sale.

The above interpretation is consistent with BPA's prior interpretations of subsection 3(d) of the Northwest Preference Act. In March 1984 BPA responded to an inquiry from the City of Tacoma's Department of Public Utilities. Tacoma was concluding a 41 average MW export sale to the Western Area Power Administration (WAPA) Central Valley Project in California. Tacoma had purchased the project output from several irrigation districts owning five hydroelectric resources, including the South Columbia Basin Irrigation District (SCBID). In its letter BPA stated an interpretation of subsections 9(c) and 3(d). BPA said subsection 3(d) restricted BPA's ability to sell firm power to a utility to replace hydroelectric energy generated in the Pacific Northwest and disposed of outside the region. BPA determined that Tacoma's hydroelectric resources could always be run against its load and thus kept available for use to serve firm load.<sup>5</sup> Although Tacoma has an ability to determine the resources it will

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<sup>5</sup> BPA's determination that Tacoma could have kept its hydroelectric resource available for service to its loads is based on an analysis not stated in the letter. Because hydroelectric resources have very low operating costs, they can always be run against existing load as either a displacement of existing resources with higher operating costs; as partial reduction of purchase power options available to the utility; as serving otherwise marginal or interruptible loads; or as a planned resources which would serve planned load to the extent of the



use to serve its firm load, its determination is limited by subsection 3(d). Because hydroelectric resources can be run against load, and because subsection 3(d) does not include the standard that BPA's requirements obligation must increase, BPA found that an export of hydroelectric power will reduce BPA's obligation to provide firm requirements power to the exporting customer under subsection 3(d). The reduction occurs, even if BPA's firm requirements obligation to that customer would not increase as a result of the export.

To the extent that BPA determines under subsections 9(c) and 3(d) that an export of a utility customer's hydroelectric resource requires a reduction in BPA's electric power requirements of the utility, BPA will reduce its obligations by the amount of the power exported by the utility and for the duration of the export when BPA makes its other section 5 determinations. In addition, BPA may only sell surplus power to the exporting utility as replacement consistent with the provision of subsection 3(d) of the Northwest Preference Act, and subsections 5(f) and 9(c) of the Northwest Power Act.

**F. Interpretation of Northwest Power Act subsection 9(d) as relating to 9(c) determinations of the Administrator**

Subsection 9(d) of the Northwest Power Act states in pertinent part:

No restrictions contained in subsection (c) shall limit or interfere with the sale exchange or other disposition of any power by any utility or group thereof from any existing or new non-Federal resource if such sale, exchange or disposition does not increase the amount of firm power the Administrator would be obligated to provide to any customer. 16 U.S.C. 839f(d).

BPA has previously interpreted this provision not to affect any determination regarding the export of hydroelectric power by a customer under subsection 3(d) of the Northwest Preference Act. This interpretation is stated in BPA's letter to the City of Tacoma regarding the export sale of SCBID to WAPA. BPA reads subsection 9(c) to be an affirmation of subsection 3(d) of the Northwest Preference Act and not a limitation upon its application to customers' hydroelectric resources that are exported.

Additionally, this provision states the same standard as subsection 9(c). That standard is whether a customer's export of power from resources, other than hydroelectric power covered under subsection 3(d), would result in an increase in BPA's electric power requirements of the exporting customer or any other customer. BPA reads the language, "if such sale, exchange, or disposition does not increase the amount of firm power the Administrator would be obligated to provide any customer" to mean the Administrator's electric power requirements do not increase for any customer as a result of the export. This is the same test as that contained in subsection 9(c) and BPA would use the same evaluation of an export as discussed above. Further, BPA's obligation to provide firm power to any

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assured capability (firm output) of the resource. See attached letter from J. Jones, BPA, to P. Nolan, Tacoma Department of Public Utilities, dated March 19, 1984.

customer is the same obligation as referred to in subsection 9(c) which is established by BPA's firm power requirements under its section 5(b) contracts with its customers.

For the reasons stated previously, BPA does not interpret either subsection 9(c) nor 9(d) to focus only upon the potential increase in the exporting customer's requirements. If subsection 9(d) were so interpreted, then the express language of subsection 9(c) directing the Administrator to consider an increase in the firm energy requirements of other customers would become a nullity. Statutory provisions are to be read so as to give effect to all of their terms. Any interpretation should avoid conflict between provisions. These two provisions cannot be rationally interpreted such that subsection 9(c) requires a look at the effect of an export on the electric power requirements of other customers based on its plain language and subsection 9(d) as declaring a limitation on that consideration which would make it irrelevant to BPA's determination.

The better interpretation is that subsections 9(c) and (d) may be read so as not to create a conflict. Subsection 9(d)'s use of the term "any" as a descriptor for customer means BPA should look at the impact on all its customer obligations within the region to provide firm power for their requirements. Only if BPA's obligations to any one customer are increased would BPA be permitted to reduce its electric power requirements obligations. The focus of BPA's determination is whether any customer's obligation would increase regardless of whether or not that customer is the exporter of the power.

APP

October 21, 1983

James F. Walsh  
Legal Department  
Montana Power Company  
40 East Broadway  
Butte, Montana 59701

Dear Mr. Walsh:

In response to your letter of October 4, 1983, inquiring as to the existence of an opinion from our office concerning P.L. 88-552 and section 9(c) of P.L. 96-501, our office has not issued a final opinion on these sections. However, BPA has released several discussion papers regarding P.L. 88-552 and P.L. 96-501 that I have enclosed for your information.

Our office has recently been asked to look at several issues related to these sections. We have prepared a preliminary draft analysis for internal discussion. This latter analysis has not yet been made public.

EPA has been asked by a customer whether BPA would reduce a customer's firm energy requirements by the amount of firm energy generated at a customer's hydroelectric project, and exported outside the region, when that project is not listed in a customer's firm resource exhibit to its power sales contract. BPA answered that such exported energy would be excluded in determining a customer's firm energy requirements. BPA cited section 9(c) of P.L. 96-501, which incorporates the exclusion of hydroelectric energy from the energy requirements of Northwest customers provided for in section 3(d) of P.L. 88-552, as authority for this decision.

BPA was also asked whether thermal energy would be similarly excluded were it exported. BPA responded that exported energy from thermal projects currently listed in a customer's firm resource exhibit similarly would be excluded. BPA cited section 9(c) of P.L. 96-501 as authority for this decision. These views were given orally. To my knowledge these are the only recent BPA interpretations of the relationship between section 9(c) of P.L. 96-501 and P.L. 88-552.

I have assigned Mr. Preston Michie to this project. If you have any further questions on this matter, please feel free to call Mr. Michie at (503) 230-4207 or myself.

Sincerely,

Harvard P. Spigal  
Acting General Counsel

DRAFT

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MAR 19 1984

Mr. Paul J. Nolan  
Director of Public Utilities  
City of Tacoma  
Department of Public Utilities  
P.O. Box 11007  
Tacoma, WA 98411

Dear Mr. Nolan:

Thank you for the opportunity to allow the Bonneville Power Administration (BPA) to express its understanding of its obligations under the Pacific Northwest Regional Preference Act, P.L. 88-552 (Regional Preference Act). While BPA agrees with the City of Tacoma (Tacoma) that sections 5(b) and 9(d) of the Pacific Northwest Electric Power Planning and Conservation Act, P.L. 96-501 (Regional Act) allow a utility the flexibility to determine whether resources will be used to serve a utility's firm load, these sections do not permit a BPA customer to circumvent BPA's obligations under the Regional Preference Act for the reasons described below.

Section 3(d) of the Regional Preference Act restricts BPA's ability to sell firm power to a utility to replace hydroelectric energy generated in the Pacific Northwest and disposed of outside the region which a utility could have kept available for its own needs in the region. Section 3(d) allows BPA to sell as replacement for such energy only surplus energy subject to cut-off on 60 days' notice.

BPA has determined that Tacoma could have kept for its own use the hydroelectric energy generated from Tacoma's share of the projects on the South Columbia Basin Irrigation District (SCBID) canals. BPA believes that Tacoma could have kept for its own use an amount of firm power equal to the amount of increase in Tacoma's assured energy capability that would result from including Tacoma's SCBID entitlement as a firm resource under Tacoma's power sales contract.

A customer's ability to determine which resources would be used to serve its firm load pursuant to section 5(b) of the Regional Act is limited by the requirements of section 3(d) of the Regional Preference Act as incorporated in section 9(c) of the Regional Act. Section 9(c) directs BPA, in making any determination of the amount of firm power BPA would sell Tacoma under its power sales contract, to exclude from a customer's entitlement to purchase firm power (1) hydroelectric generated energy excluded from a utility's firm power requirements pursuant to section 3(d) of the Regional Preference Act and

(2) electric energy from other resources a utility determines will be used to serve its firm load pursuant to section 5(b) which is sold by the utility outside the region and which increases a utility's firm energy requirements as a result of such sale. While section 9(d) of the Regional Preference Act provides that the limitations in section 9(c) shall not limit or interfere with the sale of power outside the region from any existing or new non-Federal resource if such sale does not increase BPA's obligation to sell firm power to a utility, section 9(d) does not apply to hydroelectric generated energy specifically excluded from a utility's firm power requirements pursuant to section 3(d) of the Regional Preference Act.

BPA's obligations under section 3(d) of the Regional Preference Act and section 9(c) of the Regional Act to exclude from a customer's entitlement to purchase firm power hydroelectric energy sold outside the Pacific Northwest are triggered irrespective of whether a sale of hydroelectric generated energy outside the region increases a utility's firm energy requirements on BPA as a result of the sale. Sales by BPA of firm power to replace hydroelectric generated energy sold outside the Pacific Northwest are precluded even if a utility had not elected to use such hydroelectric generated energy to serve its own firm loads.

Tacoma's power sales contract with BPA provides that BPA will sell Tacoma the difference between Tacoma's firm power load and the assured capability of resources that Tacoma has determined will be used to serve its firm load. Section 42(a) of the General Contract Provisions (GCP's) of Tacoma's power sales contract incorporates by reference the provisions of sections 9(c) and 9(d) of the Regional Act and the provisions of the Regional Preference Act including section 3(d). Section 42(c) of the GCP's provides that BPA will perform all duties and obligations imposed on BPA by the provisions of the Regional Act and Regional Preference Act incorporated by reference in such section. BPA's understanding of its obligation under its power sales contract with Tacoma and other Pacific Northwest customers and applicable law is to reduce the amount of firm energy that Tacoma is entitled to purchase from BPA by the amount of increase in Tacoma's assured energy capability that would have resulted from including Tacoma's SCBID entitlement as a firm resource under its power sales contract. BPA would begin making such reduction concurrently with the commencement of deliveries of Tacoma's SCBID entitlement outside the Pacific Northwest.

BPA does not believe that Tacoma's sale of its SCBID entitlement outside the Pacific Northwest will affect BPA's obligation to meet Tacoma's firm peak loads. Tacoma's power sales contract with BPA includes provisions in the Scheduling Procedures Exhibit that would allow Tacoma to return during off-peak hours electric energy delivered during peak hours which exceeded BPA's obligation to deliver firm energy to Tacoma.

BPA appreciates the opportunity to explain BPA's understanding of its statutory and contractual obligations. If you have any additional questions regarding this matter, please contact Mr. Thomas H. Noguchi at (503) 230-3579.

Sincerely,

Original Signed by  
JAMES L. JONES

Assistant Administrator for  
Power and Resources Management

LKitchen:1o (WP-PKI-3621b)

cc:

S. R. Larson - APP

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T. M. Noguchi - PK

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**APPENDIX C**

**BPA'S NON-FEDERAL PARTICIPATION, NORTHWEST POWER ACT,  
SECTION 9(c) POLICY**

# **BPA's Non-Federal Participation, Northwest Power Act, Section 9(c) Policy**

United States of America  
Department of Energy  
Bonneville Power Administration  
Office of Power Sales  
July 1994



**Bonneville's Non-Federal Participation,  
Northwest Power Act, Section 9(c) Policy**

**for Exports of Up to 725 MW of Pacific Northwest Resources  
over the  
Pacific Northwest-Pacific Southwest AC Intertie**

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Appendix 1: List of New Owners

**Bonneville's Non-Federal Participation,  
Northwest Power Act, Section 9(c) Policy**

**for Exports of up to 725 MW of Pacific Northwest Resources  
over the  
Pacific Northwest-Pacific Southwest AC Intertie**

**Introduction**

In 1968, the Pacific Northwest-Pacific Southwest AC Intertie (Intertie) began operation. Among other purposes, the Intertie was constructed to provide additional markets for Bonneville Power Administration (BPA) surplus firm and nonfirm power. In addition, to the extent that there was transmission capacity in excess of Federal needs, Congress intended that utilities in the Pacific Northwest and the Pacific Southwest take advantage of the seasonal diversity that exists between these regions by facilitating interregional exchanges.

Beginning in 1987, at the request of various parties, BPA began working to create increased opportunity for regional utilities to participate in the Intertie, while helping BPA defray some of the major Federal investment in the Third AC Intertie upgrade.

In May 1988, BPA finalized its Long-Term Intertie Access Policy (LTIAP), which established various operating conditions under which both Federal and non-Federal utilities would have access to the Intertie.

In 1993, BPA's Non-Federal Participation policy goal was to ensure that the 11 Pacific Northwest public and private utilities (potential "New Owners") that signed a Memorandum of Understanding with BPA in 1991 had an equitable opportunity to acquire a share of 725 megawatts (MW) of transmission capacity in the Intertie, a share as close to "full ownership" as possible, which is referred to as Capacity Ownership.

In order to become a New Owner, a Pacific Northwest utility was first required to complete a contract for the sale or exchange of a regional resource with a Pacific Southwest utility and then execute a Capacity Ownership Agreement with BPA for a share of Intertie. Whenever there is an

export of a regional resource, BPA has a statutory duty under Public Law 96-501, the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) Section 9(c) to determine whether the export of the New Owner's resource will result in an increase in the electric power requirements of BPA or of any of its customers and whether the resource could be conserved or otherwise retained to serve regional load in the Pacific Northwest.

If BPA finds that the export of a resource would result in an increase in the electric power requirements of any of its customers under BPA's Northwest Power Act, Section 5(b) utility power sales contracts, and the resource could have been conserved or otherwise retained to serve regional loads, BPA is required to reduce its firm load obligation to deliver power and energy under the exporting utility's power sales contract, effective on a date certain up to the amount of the export sale and for the duration of such sale.

If, on the other hand, BPA finds that the export of the Pacific Northwest resource would not result in any increase in the electric power requirements of BPA for that customer or any other customer, or BPA further finds that the energy could not be reasonably conserved or otherwise retained for service to regional load by reasonable measures, then BPA will not decrease its obligation to the exporting utility under its power sales contract.

In implementing Northwest Power Act, Section 9(c), BPA must reasonably balance the risk between BPA becoming obligated to acquire additional resources which it otherwise would not plan to serve additional load obligations, with the New Owner's ability to make an export. In this Non-Federal Participation, Northwest Power Act, Section 9(c) Policy (NFP Section 9(c) Policy), BPA will adhere to its prior case-by-case Section 9(c) determinations.

It is BPA's intent as part of its NFP Section 9(c) Policy determination to address at one time any Section 9(c) issues raised by the proposed initial exports by New Owners of up to 725 MW of regional resources, which is the maximum amount of Intertie transmission capacity available. BPA will use its analytical tools to review the specific resources and categories of resources being exported to determine if such exports will cause load on BPA or its customers to increase and to determine whether the resource could be conserved or retained using reasonable means.

As a result of the determinations made under the Northwest Power Act, Sections 9(c) and 9(d) and this NFP Section 9(c) Policy, the public and New Owners will know how BPA will apply its NFP Section 9(c) Policy determinations under the Northwest Power Act to those resources the New Owners initially intend to export. BPA's NFP Section 9(c) Policy will apply to the five

prospective New Owners which include: Eugene Water & Electric Board, Seattle City Light, Snohomish County Public Utility District No. 1, Tacoma Public Utilities, Puget Sound Power & Light Company, and the Pacific Northwest Generating Cooperative.

1. **Prior Northwest Power Act Section 9(c) Determinations**

a. **May 1988 - LTIAP Exhibit B, Intertie Capacity Available for Assured Delivery**

LTIAP section 4(a)(4)(A) and (B) "Waiver of Service Obligation" requires a Pacific Northwest utility exporting under an Assured Delivery contract to agree as a condition of its Assured Delivery contract to reduce BPA's firm load obligation to the utility engaged in the export, for a specified period, and in an energy amount equal to the amount of energy for which the Assured Delivery contract is provided. (The decrement for an export of a regional hydro resource begins immediately, while an export of a thermal resource is based on a notice from BPA that the exported resource is needed to meet requirements load in the Pacific Northwest.)

b. **October 1983 - BPA/Montana Power Company**

Montana Power Company asked, if in interpreting Northwest Power Act Section 5(c), BPA would reduce a customer's firm energy requirements by the amount of firm energy generated at a customer's hydroelectric project and exported outside the region, when that resource is **not** listed in a customer's firm resource exhibit. BPA response was that such energy would be excluded (decremented) from BPA's firm load obligation in determining a customer's firm energy requirements. (BPA referred to the language in Section 9(c) of the Northwest Power Act, which incorporates the exclusion of hydroelectric energy from the energy requirements of Pacific Northwest customers, and the language stated in Section 3(d) of Public Law 88-552, the Act of August 31, 1964 (Regional Preference Act), as authority for this policy.)

Montana Power Company then asked if energy from thermal resources would be similarly excluded (decremented) were it exported. Citing Section 9(c), BPA responded that exported energy from thermal projects listed in a customer's firm resource exhibit similarly would be excluded

c. **March 1984 - BPA/Tacoma Public Utilities (SCBID Hydroelectric Resource)**

In a March 19, 1984, letter from BPA to Tacoma Public Utilities over the export of Tacoma Public Utilities' South Columbia Basin Irrigation District (SCBID) hydroelectric resource, BPA found the SCBID resource was conservable and could be used to meet Tacoma Public Utilities' energy loads in the Pacific Northwest. Tacoma Public Utilities was able to export its SCBID hydro resource, but the utility's firm power requirements on BPA were reduced in the amount of the export sale, under Tacoma Public Utilities' 1981 power sales contract with BPA.

BPA said the following in its letter to Tacoma Public Utilities:

"\* \* \* While BPA agrees with the City of Tacoma \* \* \* that [S]ections 5(b) and 9(d) of the [Northwest Power Act] allow a utility the flexibility to determine whether resources will be used to serve a utility's firm load, these sections do not permit a BPA customer to circumvent BPA's obligations under the Regional Preference Act for the reasons described below.

"Section 3(d) of the Regional Preference Act restricts BPA's ability to sell firm power to a utility to replace hydroelectric energy generated in the Pacific Northwest and disposed of outside the region which a utility could have kept available for its own needs in the region. Section 3(d) allows BPA to sell as replacement for such energy only surplus energy subject to cut-off on 60 days' notice.

"BPA has determined that Tacoma could have kept for its own use the hydroelectric energy generated from Tacoma's share of the projects on the South Columbia Basin Irrigation District (SCBID) canals. \* \* \*

"A customer's ability to determine which resources would be used to serve its firm load pursuant to [S]ection 5(b) of the [Northwest Power Act] is limited by the requirements of [S]ection 3(d) of the Regional Preference Act as incorporated in [S]ection 9(c) of the [Northwest Power Act]. Section 9(c) directs BPA, in making any determination of the amount of firm power BPA would sell Tacoma under its power sales contract, to exclude from a customer's entitlement to purchase firm power (1) hydroelectric generated energy excluded from a utility's firm power requirements pursuant to [S]ection 3(d) of the Regional Preference Act and (2) electric energy from other resources a utility determines will be used to

serve its firm load pursuant to [S]ection 5(b) which is sold by the utility outside the region and which increases a utility's firm energy requirements as a result of such sale. \* \* \*

"BPA's obligations under [S]ection 9(d) of the Regional Preference Act and [S]ection 9(c) of the [Northwest Power Act] to exclude from a customer's entitlement to purchase firm power hydroelectric energy sold outside the Pacific Northwest are triggered irrespective of whether a sale of hydroelectric generated energy outside the region increases a utility's firm energy requirements on BPA as a result of the sale. Sales by BPA of firm power to replace hydroelectric generated energy sold outside the Pacific Northwest are precluded even if a utility had not elected to use such hydroelectric generated energy to serve its own firm loads."

## 2. **NFP Section 9(c) Policy Background**

This NFP Section 9(c) Policy is intended to facilitate the export by New Owners of the following: (1) newer regional resources which have never been dedicated in any firm resource exhibit; and (2) existing nonhydro regional resources which are not in any firm resource exhibit and which have been offered for sale to BPA and the region but have not been acquired. This NFP Section 9(c) Policy is **not** intended to encourage the export of regional resources which are currently dedicated to serving firm loads in any utility's firm resource exhibit, particularly when BPA and some of BPA's utility customers are in load/resource balance or deficit.

The following are the major components of the NFP Section 9(c) Policy:

- (a) BPA will complete its analysis regarding the probability of any increase in BPA's or its customers' energy obligations as a result of an export by a New Owner. BPA's analysis will review the following information: BPA's Whitebook data; customer load/resource information; customer resource stacks, and the least-cost plans of utilities who have stated in the past that they are not planning to place load on BPA;
- (b) New Owners will be able to export up to a maximum of 725 MW of regional resources under the initial Non-Federal Participation exports;

- (c) The NFP Section 9(c) Policy will be consistent with BPA's prior Northwest Power Act Section 9(c) determinations, e.g., letter to Tacoma City Light (SCBID);
- (d) BPA will apply its NFP Section 9(c) Policy to the specific exports of New Owners based on the information provided which describes specific resources and categories of resources for export;
- (e) Thermal resources not in any firm resource exhibit will be allowed to be exported by a New Owner without any decrement of their Section 5(b) utility power sales contract;
- (f) Exports of regional hydro resources and thermal resources in firm resource exhibits for power sales will result in a decrement of the New Owner's Section 5(b) utility power sales contract;
- (g) Seasonal exchanges between the Pacific Northwest and Pacific Southwest which result in no net energy loss to the region on an annual basis will not result in a decrement by BPA of a New Owner's power sales contract because there should be no need to acquire replacement energy resources or make additional energy purchases in the Pacific Northwest to support an exchange;
- (h) System sales will result in a reduction in BPA's firm load obligation to the exporting utility under its requirements contract with BPA if such sales involve the export of hydro resources, thermal resources in a firm resource exhibit, or the indirect resale of Federal power and energy (inconsistent with the utility power sales contract Exhibit A, General Contract Provisions; Section 9(c) of the Northwest Power Act; and Sections 2 and 3 of the Regional Preference Act). If a New Owner submits an operating plan for the term of the sale which identifies the resources used in the system sale, and they are thermal resources which are not in a firm resource exhibit, BPA may allow the system sale export without a decrement;
- (i) A New Owner that does not want BPA to decrement its export if BPA would otherwise do so will have the option to include recall terms in its export sale. The utility would discontinue its export sale on notice from BPA that the resource will be needed by a certain date to serve load in the Pacific Northwest; and

- (j) A New Owner may decide to offer its resource to BPA and other Pacific Northwest generating customers at the New Owner's cost including a reasonable rate of return. If the resource is not purchased it may be exported without a decrement of the New Owner's Section 5(b) utility power sales contract.

3. **NFP Section 9(c) Policy**

BPA's NFP Section 9(c) Policy is as follows:

Section 1. **Northwest Power Act Section 9(c) Determinations**

As required by the Northwest Power Act, BPA shall make its Section 9(c) determinations for the exports of New Owners using their share of Intertie for the life of the facilities.

Section 2. **Finding Required**

In examining the export of Pacific Northwest resources, BPA shall make its finding based on the following requirements of Section 9(c):

(a) BPA shall analyze whether the New Owners' exports would result in an increase in the electric power requirements of any of its customers in the region. BPA shall do this by examining its load/resource forecasting and planning documents to determine the impact the exports will have on BPA's ability to meet Pacific Northwest load presently and in the future. BPA shall also analyze the information available from other sources including least-cost plans and load/resource information of Pacific Northwest utilities which do not currently place any load on BPA.

(b) BPA shall review the specific resources and categories of resources being exported to determine if such exports will result in additional firm load obligations on BPA and if so, determine whether the resource could be conserved or otherwise retained for service to regional loads by using reasonable means. To do this BPA shall compare the resource a New Owner is proposing to export with those resources which BPA finds in its analysis can be exported without having to decrement the New Owners' Section 5(b) utility power sales contract.



### Section 3. **Scope of NFP Section 9(c) Policy**

This NFP Section 9(c) Policy initially addresses the amount of anticipated exports (up to 725 MW) of Pacific Northwest resources by New Owners who obtain a share of the Intertie. If more non-Federal Intertie is made available in the future, the NFP Section 9(c) Policy shall also apply to such additional increment of Intertie. As noted in section 2, BPA shall make its Section 9(c) determinations based on a factual determination using information about the specific resource the New Owner intends to export. This policy does not automatically decrement New Owners for any resource when they wheel for others and in which the New Owner has no ownership or contractual interest. BPA shall analyze such third-party wheeling over a new Owner's share of Intertie on a case-by-case basis.

### Section 4. **Data on Specific Resources**

BPA shall base its Section 9(c) determination on specific information BPA has obtained from New Owners on the resources they intend to export. This includes, but is not limited to, the following information:

- (a) name of the resource to be exported;
- (b) location of the resource;
- (c) type of resource;
- (d) whether the resource is currently in any Pacific Northwest utility's firm resource exhibit;
- (e) whether the resource is planned or existing; and
- (f) type of transaction or sale, and if it is a seasonal exchange, the terms of the exchange.

BPA will also consider any prior history of the resource including prior efforts to market it to BPA or other Pacific Northwest utilities.

## Section 5. **Prior Case-by-Case Section 9(c) Interpretations**

BPA does not propose to modify its existing determinations on Pacific Northwest utility exports and will apply its prior case-by-case interpretations of Section 9(c), and Section 3(d) of the Regional Preference Act without modification. Therefore, BPA incorporates by reference in this Policy these prior interpretations of Section 9(c).

## Section 6. **Categories of Resources**

(a) **Exports That May Not be Decrementd by BPA.** Under this NFP Section 9(c) Policy determination, BPA would determine that the export of certain resources are not likely to result in an increase in the electric power requirements of any of its customers under its Section 5(b) utility power sales contracts and thus may be exported without a reduction in BPA's firm load obligation under the New Owner's Section 5(b) utility power sales contract. Those resources which are of a similar type will be treated the same for purposes of this determination, e.g., all new cogeneration resources proposed for export shall be treated the same. Those resources which, based on BPA's present information, may not result in any increase in electric power requirements include the export of existing or planned cogeneration, renewable (nonhydro) or thermal resources exported by a New Owner, that are currently not dedicated in any Pacific Northwest utility's firm resource exhibit.

(b) **Exports That Will be Decrementd by BPA.** BPA has determined based on its prior policy interpretations of Northwest Power Act Section 9(c) that the following categories of resources are conservable and if they are exported BPA shall decrement the New Owner's Section 5(b) power sales contract:

(1) all Section 5(b)(1)(A) and 5(b)(1)(B) Pacific Northwest hydroelectric resources owned or purchased by a Pacific Northwest utility, whether or not dedicated in any Pacific Northwest utility's firm resource exhibit; and

(2) all Section 5(b)(1)(A) and 5(b)(1)(B) thermal resources that are currently dedicated by a utility in any firm resource exhibit.

## Section 7. **System Sales**

BPA shall utilize a case-by-case approach to system sales. BPA shall require the exporting utility to submit an operating plan for the duration of the export, identifying these specific resources or categories of resources supporting the system sale. If the export is a system sale made up of resources that would not result in a decrement if standing alone, then BPA would not decrement such a system sale. BPA shall decrement the New Owner's Section 5(b) utility power sales contract if the system sale involves the export of hydro to support a power sale (whether or not in a firm resource exhibit); thermal that is in a firm resource exhibit; or any sale that is a prohibited resale of Federal power.

Any New Owner that is a Contracted Requirements customer of BPA, and which is currently purchasing power and energy from BPA under its power sales contract, shall have BPA's firm energy obligation under its power sales contract reduced in the amount of energy and duration of the export sale. If the New Owner is not currently placing load on BPA under its Section 5(b) utility power sales contract, then at such time as the New Owner requests to place a firm load obligation on BPA, BPA shall make an appropriate determination and may reduce its energy sales to such New Owner in the amount of the export sale and for any remaining duration of the export sale.

## Section 8. **Seasonal Exchange**

Any seasonal exchange between a New Owner and a Pacific Southwest utility which results in no net regional energy deficit during any Operating Year, shall not result in a decrement by BPA of the New Owner's Section 5(b) utility power sales contract.

## Section 9. **Recall**

Any New Owner that does not want its Northwest Power Act, Section 5(b) power sales contract decremented by BPA may agree to include terms for the recall of its export sale upon notice from BPA that the energy from such New Owner's resource is needed to meet requirements load in the Pacific Northwest.

## Section 10. **Resource Offer**

This NFP Section 9(c) Policy gives a New Owner an option to offer a resource to BPA or to all other Pacific Northwest generating utilities. If offered for sale to BPA, the resource shall be treated as an unsolicited proposal. If BPA proposes to acquire the resource, and if it is greater than a 50 aMW, it will be subject to the Northwest Power Act Section 6(c) process, which can take up to 12 months or more. If neither BPA nor any Pacific Northwest utility purchases the offered resource (offered at the New Owner's cost including a reasonable rate of return) the resource may then be exported without a decrement of the New Owner's Northwest Power Act Section 5(b) power sales contract.

## Section 11. **Consumer-Owned and Independent Power Producer-Owned Resources**

If a New Owner contracts to purchase and then export any consumer-owned resource or any resource developed by an independent power producer, BPA shall decrement the New Owner's Section 5(b) power sales contract if the resource being exported is a hydroelectric resource or is dedicated to any Pacific Northwest utility load in any utility's firm resource exhibit.

## Section 12. **BPA Notification**

From the date BPA's NFP Section 9(c) Policy determination is final, BPA shall notify in writing each New Owner with an allocated share of Intertie of the outcome of BPA's Section 9(c) determination. The BPA notification shall be made within 30 working days from the date the New Owner notifies BPA that it will be exporting a regional resource over its allocation share of Intertie.

## **Appendix 1**

### **List of New Owners**

The five Non-Federal Participation Participants include:

1. Pacific Northwest Generating Cooperative
2. Puget Sound Power & Light Company
3. Seattle City Light
4. Snohomish County Public Utility District No. 1
5. Tacoma Public Utilities

BONNEVILLE POWER ADMIN



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NON-FEDERAL PARTICIPATION  
CAPACITY OWNERSHIP  
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