From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB

Sent: Wed Aug 25 13:29:06 2021

To: Vierck,Alexandra L (CONTR) - TPCC-TPP-4; Galbraith,Brian T (BPA) - TPCC-TPP-4; Harris,Adelle L (TFE)(BPA) - TSES-TPP-2; Wick,Martin A (BPA) - TPCV-TPP-4; Cosola,Anna M (BPA) - TPCC-TPP-4; Huntington,Joseph J (TFE)(BPA) - TSES-TPP-2; Mendez-Sierra,Akira M (BPA) - TPPC-OPP-3; Ngoy,Prachthearat (BPA) - TPMC-OPP-3; cwillenbrock@popud.org; David Hodder:

Subject: RE: L0494 Ponderay Renewable Fiber and Blockchain Project LLIR Kickoff Meeting Minutes FINAL

Importance: Normal

Thanks Murphy. I will review and report back.

J

From: Vierck, Alexandra L (CONTR) - TPCC-TPP-4 <alwitbrodt@bpa.gov>

Sent: Wednesday, August 25, 2021 1:27 PM

To: Galbraith,Brian T (BPA) - TPCC-TPP-4

Stgalbraith@bpa.gov>; Harris,Adelle L (TFE)(BPA) - TSES-TPP-2 <alharris@bpa.gov>; Lacambra,Jared M (BPA) - TPCF-MEAD-GOB <jmlacambra@bpa.gov>; Wick,Martin A (BPA) - TPCV-TPP-4 <mawickjr@bpa.gov>; Cosola,Anna M (BPA) - TPCC-TPP-4 <amcosola@bpa.gov>; Huntington,Joseph J (TFE)(BPA) - TSES-TPP-2 <jjhuntington@bpa.gov>; Mendez-Sierra,Akira M (BPA) - TPPC-OPP-3 <ammendezsierra@bpa.gov>; Ngoy,Prachthearat (BPA) - TPMC-OPP-3 <pxngoy@bpa.gov>; cwillenbrock@popud.org; David Hodder: <dhodder@popud.org>

Subject: RE: L0494 Ponderay Renewable Fiber and Blockchain Project LLIR Kickoff Meeting Minutes FINAL

Please see the attached finalized meeting minutes for L0494.

Thank you.

Alexandra (Murphy) Vierck (ContR)

Program Support Specialist

Customer Service Engineering, Contract Administration

Bonneville Power Administration

bpa.gov | P 360-418-2551

-----Original Appointment-----

From: Vierck, Alexandra L (CONTR) - TPCC-TPP-4 On Behalf Of Galbraith, Brian T (BPA) - TPCC-TPP-4

Sent: Monday, July 19, 2021 09:34

To: Harris, Adelle L (TFE)(BPA) - TSES-TPP-2; Lacambra, Jared M (BPA) - TPCF-MEAD-GOB; Wick, Martin A (BPA) - TPCV-TPP-4; Cosola, Anna M (BPA) - TPCC-TPP-4; Vierck, Alexandra L (CONTR) - TPCC-TPP-4;

Huntington, Joseph J (TFE) (BPA) - TSÈS-TPP-2; Mendez-Sierra, Akira M (BPA) - TPPC-OPP-3; Ngoy, Prachthearat (BPA) - TPMC-OPP-3; cwillenbrock@popud.org; David Hodder:

Subject: L0494 Ponderay Renewable Fiber and Blockchain Project LLIR Kickoff Meeting

When: Wednesday, August 18, 2021 08:30-09:30 (UTC-08:00) Pacific Time (US & Canada).

Where: Phone Conference: 509-822-4485 (b)(6)

2

Good morning,

Please see attached agenda for the Line and Load Kickoff meeting regarding L0494 occurring August 18th, 2021 from 8:30 to 9:30am.

For those of you that are calling in, the phone bridge information is listed in the attached agenda as well as here below:

Telephone Bridge

509-822-4485

Call ID (b)(6)

Thank you.

From: Harris, Adelle L (TFE)(BPA) - TSES-TPP-2 Sent: Thu Aug 26 16:45:44 2021 To: April Owen Subject: RE: Your message Importance: Normal Hi April, That would be great! Gives me some time to do some more digging. I'm fairly certain Pend Oreille will need to purchase transmission in the short-term market, however I want to make sure I give you the best information possible. Adelle

From: April Owen <aowen@popud.org> Sent: Thursday, August 26, 2021 4:20 PM

To: Harris, Adelle L (TFE)(BPA) - TSES-TPP-2 <alharris@bpa.gov>

Subject: [EXTERNAL] RE: Your message

Hi Adelle,

Do you mind if we set up a call Monday or Tuesday to discuss? It might be easier as a verbal discussion, plus I would like to invite Tyler Whitney to join so that we can both learn at the same time.

I also have an additional question for you (so sorry to throw these all on!). We have 2 separate customers that would like to increase their loads by approximately 8 MW each. They are cryptominers, so they can do this rather quickly. The additional load wouldn't be transmitted over BPA transmission, but would obviously be an increase in energy transmission for our overall system. Would this need a system impact study? I want to make sure we are not overstepping any bounds in our communications with customers.

Thanks Adelle!

April.

April Owen

Director, Audit, Finance & Power Supply

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington | Newport, WA 99156

509.447.9321 | aowen@popud.org | www.popud.org

From: Harris, Adelle L (TFE)(BPA) - TSES-TPP-2 alharris@bpa.gov

Sent: Thursday, August 26, 2021 8:26 AM **To**: April Owen <aowen@popud.org>

Subject: Your message

CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi April,

I wanted to drop a quick note to let you know I got your message and I am doing some research. When I pull up Pend Oreille's Point to Point contract history, it appears only 8MW was delivered over our system since 2017, but I know that can't be correct. The prior AE Angela DeClerck left me some notes that say:

"56 MW out of Boundary

8 MW from Box Canyon

Pend Oreille was purchasing transmission from Snohomish"

I was able to match up the 56 MW to a TSR in our system labeled as a Grandfathered LTF TSR (73532821) that is associated with a Boundary Transformer Agreement between Pend Oreille PUD, Seattle City Light, and BPA.

I need to make a few phone calls to try and figure this out so stay tuned. J

Adelle L. Harris

Transmission Account Executive

Dark Fiber / Commercial Wireless Program Manager

TSE/TPP-2

'(360) 619-6090 | ' (b)(6) | y <u>alharris@bpa.gov</u>

Bonneville Power Administration

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referenced recipient. Any review, copying, printing, disclosure, distribution, or any other use, is strictly prohibited. If you are not the intended recipient, and believe that you have received this email in error, please notify the sender and delete the copy you received.

Pend Oreille County Public Utility District #1

From: TPCC_Contracts

Sent: Mon Aug 30 07:38:46 2021

To: cwillenbrock@popud.org

Cc: Galbraith, Brian T (BPA) - TPCC-TPP-4

Subject: IMPORTANT: FOR SIGNATURE: L0494_21TP-12420 Pend Oreille County PUD LLISIS

Importance: Normal

Attachments: L0494_21TP-12420_SIS Letter Final.pdf; L0494_21TP-12420_SIS Agreement Final.pdf; BPA Payment Instructions April

2019.pdf

The attached contract document requires Pend Oreille County PUD No. 1 signature (E-signature) by Close of Business on **09/20/2021**.

Please E-sign, type your title in the space provided and return to BPA by replying to this email and attaching the E-signed contract document.

Instructions:

ü Click the flagged signature field throughout the contract document, insert your E-signature and type in your title.

ü Save the PDF file for your records (saving is required prior to returning by email to capture your E-s
--

ü Reply to this email (<u>tpcc_contracts@bpa.gov</u>) by the date stated above and attach your E-signed contract document.

The enclosed cover letter provides further instructions and alternatives. If you have any questions, please contact Adelle Harris at (360) 619-6090.

Note: BPA Portland and Vancouver offices are closed for an undetermined time due to the COVID-19 virus. In order to avoid delay of payments made to BPA, please submit via electronic payment methods described in the attached Payment Instructions. Thank you for your understanding.

Thank you.

Department of Energy



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

TRANSMISSION SERVICES

August 30, 2021

In reply refer to: TSE/TPP-2

Mr. F. Colin Willenbrock, General Manager Pend Oreille County PUD No. 1 PO Box 190 Newport, WA 99156-0190

Dear Mr. Willenbrock:

Pend Oreille County PUD No. 1 (Pend Oreille) submitted a Line and Load Interconnection Request to the Bonneville Power Administration (BPA), dated July 12, 2021, proposing to interconnect 85 MW paper mill load and additional data center load of 215 MW (300 MW total) at the Ponderay newsprint site that connects to BPA's Usk 230 kV Substation. BPA entered the request into its Interconnection Queue as Request No. L0494 (Request). A Line and Load Interconnection System Impact Study (LLISIS) is required to identify any system constraints, additional network facilities, and direct assignment facilities required to serve the proposed interconnection.

Enclosed is a signed original of Agreement No. 21TP-12420 between Pend Oreille and BPA, which provides for the LLISIS. Please have Pend Oreille's authorizing official electronically sign the flagged signature field in the Agreement and return by email to tpcc_contracts@bpa.gov by Close of Business (COB) on September 20, 2021. Alternatively, Pend Oreille may print, sign and scan the Agreement into a PDF file and return to BPA by email, or send a signed paper copy to one of the following addresses:

First Class Mail

U. S. Department of Energy Bonneville Power Administration ATTN: Brian Galbraith - TPCC/TPP-4

P.O. Box 61409 Vancouver, WA 98666 Overnight Delivery Service

U. S. Department of Energy Bonneville Power Administration ATTN: Brian Galbraith - TPCC/TPP-4

905 NE 11th Avenue Portland, OR 97232 Phone: (503) 230-5912

The required advance payment of \$30,000 can be made by wire transfer or ACH credit (payment instructions enclosed). Please reference Agreement No. 21TP-12420 when remitting payment. The executed Agreement and payment must be received by COB on September 20, 2021, or this offer will be withdrawn.

If you have any questions concerning this matter, please contact me at (360) 619-6090, or Brian Galbraith, Line and Load Interconnection Administrator at (503) 230-5912.

Sincerely,

(b)(6)

Adelle L. Harris 2021.08.30 07:32:26 -07'00'

Transmission Account Executive Transmission Sales

2 Enclosures

U.S. DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION

AGREEMENT

AGREEMENT NUMBER	2. AGREEMENT EFFECTIVE FROM DATE IN BLO		LOCK 4 UNTIL	3. AMENDMENT NO.	4. EFFECTIVE DATE
21TP-12420		See Block #11		-0-	Same as Block #17
ISSUED TO		ISSUED BY			
5. ORGANIZATION AND ADDRESS			6. ORGANIZATION AND ADDRESS		
Pend Oreille County PUD No. 1			U.S. Department of Energy		
ATTN: Mr. F. Colin Willenbrock, General Manager			Bonneville Power Administration		
PO Box 190			ATTN: Brian Galbraith – TPCC/TPP-4		
Newport, WA 99156-0190			P.O. Box 61409		
			Vancouve	r, WA 98666	
7. TECHNICAL CONTACT		PHONE NUMBER	8. TECHNICAL	CONTACT	PHONE NUMBER
David Hodder		(509) 447-9343	Jared Lac	ambra	(509) 822-4605
9. ADMINISTRATIVE CONTACT	Т	PHONE NUMBER	10. ADMINIST	RATIVE CONTACT	PHONE NUMBER
David Hodder		(509) 447-9343	Martin Wi	ck	(360) 619-6818

^{11.} TITLE/BRIEF DESCRIPTION OF WORK TO BE PERFORMED UNDER THIS AGREEMENT

LINE AND LOAD INTERCONNECTION SYSTEM IMPACT STUDY AND ASSOCIATED TASKS FOR INTERCONNECTION REQUEST NO. L0494 – PONDERAY RENEWABLE FIBER AND BLOCKCHAIN PROJECT

Pend Oreille County PUD No. 1 (Pend Oreille) submitted a Line and Load Interconnection request on July 12, 2021, proposing to interconnect 85 MW paper mill load and additional data center load of 215 MW (300 MW total) at the Ponderay newsprint site that connects to BPA's Usk 230 kV Substation. The request has been entered into BPA's Interconnection Queue as Request No. L0494.

In order to assess the impact of this request, the Bonneville Power Administration (BPA) will, at Pend Oreille's expense, perform a Line and Load Interconnection System Impact Study (LLISIS) to assess the impact of the proposed interconnection of Pend Oreille's facilities on BPA's transmission system, and on the transmission systems of any third parties. The LLISIS will identify any system constraints, additional network facilities, and direct assignment facilities required to provide the requested interconnection. The LLISIS evaluation will include, but not be limited to: (i) facility thermal overloads; (ii) voltage support and control problems; (iii) voltage stability problems; (iv) transient stability problems; and (v) dynamic stability problems. The LLISIS will be based upon the results of previously performed studies, where applicable.

The Point of Interconnection to be studied will be BPA's Usk Substation.

BPA estimates that the LLISIS and associated tasks will require 60 days to complete, following BPA's receipt of this fully executed Agreement and associated payment from Pend Oreille.

Termination: This Agreement shall become effective upon execution by both parties and shall terminate upon full performance by both parties of their respective obligations set forth herein, but in no event shall the term of this Agreement exceed five years from its effective date.

The following document is attached to and becomes a part of this Agreement:

• Financial Terms and Conditions Statement

12. AMOUNT TO BE PAID BY BPA		13. AMOUNT TO BE PAID TO BPA		
\$		\$30,000 (estimated)		
14. SUBMIT SIGNED AGREEMENT TO		15. ACCOUNTING INFORMATION (For BPA Use Only)		
U.S. Department of Energy Bonneville Power Administration ATTN: Brian Galbraith - TPCC/TPP-4 P.O. Box 61409 Vancouver, WA 98666		16. SUBMIT INVOICE TO (Name and Address)		
,				
PARTICIPANT		BPA		
	DATE (MM/DD/YY)	BPA 18. APPROVED BY (Signature) Adelle L. Harris 2021.08.30 07:32:55 -07'00'	DATE (MM/DD/YY)	
PARTICIPANT	DATE (MM/DD/YY)	18. APPROVED BY (Signature) Adelle L. Harris 2021.08.30 07:32:55	DATE (MM/DD/YY)	

BPA's cost of performing the study at Pend Oreille's expense shall be the actual cost of doing the work specified in this Agreement, plus an overhead rate of 35%, representing the indirect costs of the study office plus the contractual support costs of contract negotiation, billing and accounting functions, and contract management.

Pend Oreille hereby agrees to advance \$30,000, the estimated study cost, to BPA upon execution of this Agreement. Payments made to BPA shall be held in an account established for this Agreement.

If BPA needs additional funds to complete the work at any time during performance of the study, BPA may request, in writing, for Pend Oreille to advance such additional funds to BPA for deposit in the account. Pend Oreille shall advance such additional funds within 30 days of BPA's written request, and BPA may temporarily stop work until Pend Oreille supplies the requested funds. If Pend Oreille does not advance such additional funds by the due date or, if at any time before completion of the study Pend Oreille elects to stop work under this Agreement, BPA has the right to cease all work and restore, as a cost to the study at Pend Oreille's expense, government facilities and/or records to their condition prior to the beginning of work under this Agreement.

Within a reasonable time after completion of the study, BPA shall make a full accounting to Pend Oreille showing the actual costs charged against the account. BPA shall either remit any unexpended balance in the account to Pend Oreille or bill for any costs in excess of the deposits in the account. Pend Oreille shall pay any excess costs within 30 days of the invoice date (due date).

Payments not received by the due date will accrue interest on the amount due beginning the first calendar day after the due date to the date paid, at an annual interest rate equal to the higher of i) the prime rate (as reported in the Wall Street Journal in the first issue published during the month in which payment by Pend Oreille is due) plus 4 percent; or ii) such prime rate multiplied by 1.5.

BPA Payment Instructions

1. Wire Transfer (FEDWIRE) Payment Instructions

Check with your bank for wire transfer deadlines and associated wire fees. You may contact us after your first wire payment, and we will verify that it transferred accurately.

Necessary Information to Complete Process:

- 1) ABA Number: 021030004
- 2) Receiving Bank: "TREAS NYC"
- 3) Product Code: "TREAS NYC / CTR"
- 4) Account: 89001401
- 5) Third Party Information After "OBI=" Provide pertinent information to insure correct application of payment. (i.e.: the BPA invoice number you are paying, the contract number, or other information specific to your payment)

2. Automated Clearing House (ACH) Credit Instructions

Payments must be submitted no later than the day before payment is due since ACH is processed overnight. You may contact us at (503) 230-5788, after your first ACH payment, and we will verify that it transferred accurately.

Necessary Information to Complete Process:

- 1) ABA Number: 051036706
- 2) Account Number: 312013
- 3) Receiving Bank: Federal Reserve Bank
- 4) Bank Address: 701 E. Byrd Street, Richmond, VA 23219
- 5) Bank Phone Number: 804-697-8000
- 6) Receiver Name: BPA
- Identification Number: This field may be used instead of the addenda record to identify the payment.

3. Direct Debit Payment

This option authorizes the Bonneville Power Administration (BPA) to automatically withdraw payments from a bank account. It is free and only requires registration. Submit the direct debit form.

4. Payment by Credit Card or Checking Account (Pay.gov)

BPA accepts VISA, MasterCard, American Express, Discover, and Diners for invoices under \$25,000 (limited to one credit card transaction per invoice) or electronic payments from a checking account for any dollar amount. Go to Pay.gov.

5. Payment by Check (only if permitted by agreement or contract terms)

U.S. Postal Service

BONNEVILLE POWER ADMINISTRATION ATTN: LOCKBOX P.O. BOX 3621 PORTLAND, OR 97208-3621

FedEx

BONNEVILLE POWER ADMINISTRATION ATTN: LOCKBOX 905 NE 11th AVE PORTLAND, OR 97232

For more information: visit <u>HowtoPay</u>, email ar@bpa.gov or call 503-230-5788.

This information is being provided to you upon your request. It contains sensitive account and banking information. It should be used for its intended purpose only.

Updated April 2019

From: April Owen Sent: Mon Aug 30 11:30:24 2021 To: Patton, Kathryn B (BPA) - PSS-SEATTLE Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx Importance: Normal Thank you! From: Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov> Sent: Monday, August 30, 2021 11:11 AM To: April Owen <aowen@popud.org> Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>; Babaidhan, Sami A (BPA) - PSSE-MEAD-GOB <sababaidhan@bpa.gov> Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx Hello April, The attached has Scenario 3.

1

Annual Net Requirement: 16.633

Monthly Block Amounts:
October
November
December
January
February
March
April
May
June
July
August
September
5,208
21,630

27,528

24,192

23,033

1,440

0

0

5,208

5,952

11,520

Monthly Power Costs:

\$234,228

\$635,830

\$604,528

\$895,720

\$866,362

\$723,074

\$235,772

3

\$203,352

\$202,879

\$155,062

\$189,470

\$410,300

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

cid:image001.jpg@01D52C3E.DF0B9390cid:image008.jpg@01D52C3E.09FCE1E0cid:image009.jpg@01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0

From: April Owen <aowen@popud.org>
Sent: Monday, August 30, 2021 10:45 AM

To: Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov >

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Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov >; Babaidhan, Sami A (BPA) - PSSE-MEAD-GOB <sababaidhan@bpa.gov> Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx Good morning Kate, I was wondering where to go next when I got the notification from Andres, so thank you for running the numbers! That was very helpful, as I was not correctly incorporating in my estimates how the months with zero NLSL reduced the overall Net Requirements annual average. Could you run one more scenario for me? Oct Nov Dec Jan Feb Mar <u>Apr</u> May

5

June

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

Cryptomining (New NLSL) Total additional load

105
105
144
144
144
144
144
144
144
We are meeting with the customer this afternoon, so I am hoping to be able to get back to everyone on our final number tomorrow. Thanks for all the help!
April.

26980451 BPA-2022-00699-F 0489

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From: Patton,Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov>

Sent: Monday, August 30, 2021 10:16 AM

To: April Owen aowen@popud.org">aowen@popud.org; Cicarelli,Andres A (BPA) - KSL-BELL-1 aacicarelli@bpa.gov

Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>; Babaidhan, Sami A (BPA) - PSSE-

MEAD-GOB < sababaidhan@bpa.gov >

Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Hello April,

Just to let you know Andres retired on Friday. Mike is working with our forecasting manager to find out who will be covering his accounts.

In the meantime I was able to mock up new Net Requirement calculations based on your two scenarios. You can reference attached to see the specifics but here is how it breaks down.

Scenario 1:

Annual aMW Net Requirement: 7.896 aMWs

Monthly Block amounts:

October

November

December

January

February

March

April

May

June

July

August

September

2,232

10,094

9,672

13,392

11,424

11,145 720

10

0

2,976

2,976

Monthly Total Power Costs:

\$104,174

\$296,516

\$304,490

\$435,058

\$409,343

\$349,143

\$112,752

\$96,532

\$96,307

\$88,557

\$94,772

11

\$182,554
Scenario 2:
Annual aMW Net Requirement: 6.354
Monthly Block amounts:

aMWs

October

November

December

January

February

March

April

May

June

July

12

August

September

2,232

8,652

7,440

10,416

9,408

8,916

720

0

0

2,232

2,232

4,320

Monthly Total Power Costs:

\$96,556

\$254,788

13

\$232,742

\$339,136

\$336,285

\$279,494

\$93,940

\$77,681

\$77,501

\$66,432

\$71,041

\$154,437

Please let me know if you have any questions.

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

<u>cid:image001.jpg@01D52C3E.DF0B9390cid:image008.jpg@01D52C3E.09FCE1E0cid:image009.jpg@01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0cid:image012.jpg@01D52C3E.09FCE1E0</u>

From: April Owen aowen@popud.org Sent: Friday, August 27, 2021 4:05 PM

To: Cicarelli, Andres A (BPA) - KSL-BELL-1 < aacicarelli@bpa.gov>

Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov >; Patton, Kathryn B (BPA) - PSS-

SEATTLE < kbpatton@bpa.gov>

Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Hi Andres,

Mike and Kate and I discussed the Net Requirements process, as BPA transmission will need to perform studies at the mill site that will delay their start date. We discussed running through some scenarios to see what difference it made (if any) on the Net Requirements calculation. Not sure if you are the right person for this, but started with you!

Here's what I would like to test:

<u>Oct</u>

<u>Nov</u>

<u>Dec</u>

<u>Jan</u>

<u>Feb</u>

<u>Mar</u>

<u>Apr</u>

<u>May</u>

<u>June</u>

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

0

0

0

85

16

26980451 BPA-2022-00699-F 0498

Total additional load

<u>Oct</u>

<u>Nov</u>

<u>Dec</u>

<u>Jan</u>

<u>Feb</u>

<u>Mar</u>

<u>Apr</u>

<u>May</u>

<u>June</u>

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

Cryptomining (New NLSL)

26980451 BPA-2022-00699-F 0501

Total additional load

Let me know if I should run this through someone else. Again, I am looking to see if it changes what our annual Net Requirements will be. Otherwise, we will stick with what you have outlined below.

Thanks!

April.

April Owen

Director, Audit, Finance & Power Supply

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington | Newport, WA 99156

509.447.9321 | aowen@popud.org | www.popud.org

From: Cicarelli, Andres A (BPA) - KSL-BELL-1 < aacicarelli@bpa.gov >

Sent: Friday, August 20, 2021 12:09 PM **To:** April Owen <aowen@popud.org>

Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

Subject: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

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Hi April,

Attached is the revised FY2022 forecast for Pend Oreille based on the PUD's comments. Any thoughts?
Talk to you later,
Andres

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Pend Oreille County Public Utility District #1

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From: Galbraith, Brian T (BPA) - TPCC-TPP-4

Sent: Mon Aug 30 16:31:13 2021

To: Colin Willenbrock

Cc: Tyler Whitney; April Owen; Harris, Adelle L (TFE)(BPA) - TSES-TPP-2

Subject: RE: IMPORTANT: FOR SIGNATURE: L0494_21TP-12420 Pend Oreille County PUD LLISIS

Importance: Normal

Thanks for the heads up, Colin. I'll be looking for the funds transfer to post so I can initiate the system impact study.

Brian

From: Colin Willenbrock <cwillenbrock@popud.org>

Sent: Monday, August 30, 2021 3:37 PM

To: TPCC Contracts <tpcc contracts@bpa.gov>

Cc: Galbraith, Brian T (BPA) - TPCC-TPP-4 btgalbraith@bpa.gov; Tyler Whitney TWhitney@popud.org; April

Owen <aowen@popud.org>

Subject: [EXTERNAL] RE: IMPORTANT: FOR SIGNATURE: L0494_21TP-12420 Pend Oreille County PUD

LLISIS

Please see attached fully executed agreement. Electronic funds transfer per the instructions will be forthcoming.

Thank you,

Colin

F. Colin Willenbrock

General Manager

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156 509.447.3137 | cwillenbrock@popud.org | www.popud.org

From: TPCC_Contracts < tpcc_contracts@bpa.gov >

Sent: Monday, August 30, 2021 7:39 AM

To: Colin Willenbrock < cwillenbrock@popud.org>

Cc: Galbraith, Brian T (BPA) - TPCC-TPP-4 < btgalbraith@bpa.gov>

Subject: IMPORTANT: FOR SIGNATURE: L0494_21TP-12420 Pend Oreille County PUD LLISIS

2

CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

The attached contract document requires Pend Oreille County PUD No. 1 signature (E-signature) by Close of Business on <u>09/20/2021</u>.

Please E-sign, type your title in the space provided and return to BPA by replying to this email and attaching the E-signed contract document.

Instructions:

- ü Click the flagged signature field throughout the contract document, insert your E-signature and type in your title.
- ü Save the PDF file for your records (saving is required prior to returning by email to capture your E-signature).
- ü Reply to this email (<u>tpcc_contracts@bpa.gov</u>) by the date stated above and attach your E-signed contract document.

The enclosed cover letter provides further instructions and alternatives. If you have any questions, please contact Adelle Harris at (360) 619-6090.

3

Note: BPA Portland and Vancouver offices are closed for an undetermined time due to the COVID-19 virus. In order to avoid delay of payments made to BPA, please submit via electronic payment methods described in the attached Payment Instructions. Thank you for your understanding.

Thank you.

NOTICE: This email may contain confidential or privileged material, and is intended solely for use by the above referenced recipient. Any review, copying, printing, disclosure, distribution, or any other use, is strictly prohibited. If you are not the intended recipient, and believe that you have received this email in error, please notify the sender and delete the copy you received.

Pend Oreille County Public Utility District #1

4

From: Normandeau, Mike (BPA) - PSE-RONAN

Sent: Tue Aug 31 12:45:45 2021

To: April Owen; Colin Willenbrock (cwillenbrock@popud.org)

Cc: Patton, Kathryn B (BPA) - PSS-SEATTLE; Babaidhan, Sami A (BPA) - PSSE-MEAD-GOB; Moore, Lisa A (BPA) - PSSE-MEAD-GOB; Harris, Adelle L (TFE)(BPA) - TSES-TPP-2; Lacambra, Jared M (BPA) - TPCF-MEAD-GOB

Subject: Checking In- New Large Single Load (NLSL) Information

Importance: High

Attachments: External_NLSL-Presentation_Slice or Block.pptx; FacilityDeterminationRequestLetterExample_draft.docx; Checklist.pdf

Good Afternoon April,

Passing along information regarding what is required for BPA to begin a NLSL determination. As noted in our call last week, we currently driving towards an agreed to Net Requirement for FY 2022. The scenarios you provided us late last and early yesterday should help us get there. This will be my main focus for the discussion tomorrow afternoon. With that said, the NLSL determination/monitoring process also needs to start warming up. Much will depend on the sequencing for how the mill and crypto load comes online. The sooner the crypto load comes online, the faster we need to be in getting the NLSL determination up and running.

Three documents are attached.

- NLSL Presentation

 note: we are assuming a Planned NLSL for the Crypto Load
- 2. Letter Template for requesting a NLSL determination
- 3. Checklist for types of information we will need Note: there's a ton of detail required. We'll work with you as the information becomes available...

My preference is that we get the Net Requirement finalized and then quickly switch gears to the NLSL

determination process. The first step being the PUD sends us a letter requesting the process to begin. We then respond with an acknowledgement and a request for additional information (this is largely covered in the attached checklist). I'll do everything in my power to keep this as simple as possible for the PUD. I know how busy you all are.

If time allows, we will touch on the NLSL process tomorrow. Adelle Harris from Transmission will also be on the call. Look forward to the discussion!

Mike

Michael R. Normandeau

Account Executive | PSE - Power Services

Bonneville Power Administration

bpa.gov | P 406-676-2669 | C(b)(6)

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New Large Single Load (NLSL)



NLSL Definition

- Per Section 3(13) of the Northwest Power Act, a New Large Single Load (NLSL) is:
 - Any load that grows by 10 aMW or more in any consecutive 12-month period provided that
 - the load was **not** contracted for, or committed to be served (as determined by the Administrator) by a public body, cooperative, investor-owned utility, or Federal agency customer prior to September 1, 1979. Also known as a CFCT load.
 - Occurred at a single facility, as determined by BPA.
- 10 aMW means a single facility takes an additional 87,600,000 kWh (non leap year) during a consecutive 12-month period.
- A end-use consumer may have multiple facilities. The individual facilities will have separate monitoring periods and will be measured independently of each other.

Why Were NLSLs Created

- Why did Congress write into the Regional Act provisions regarding NLSLs?
 - Protect industry in other parts of the country by eliminating rate enticements to relocate to the Pacific Northwest.
 - 2. To preserve the benefits of the Federal Columbia River Power System (FCRPS) for residential and small-farm customers of public utilities in the Pacific Northwest.
 - 3. To discourage migration of investor-owned utility (IOU) industrial customers to public utilities.

Why Does the NLSL Designation Matter?

- BPA has a statutory obligation to monitor loads to determine if they are NLSLs.
- BPA cannot serve NLSLs at BPA's lowest Preference (PF) Rates.
- BPA has a statutory obligation to serve NLSLs, if requested, but only at the New Resource (NR) rate.
 - BPA's NR Rate constitutes a 7(b)(3) Rate Supplement, which in BP-18 is about \$80 per MWh.
- Customers also can elect to serve NLSLs with non-federal resources.

How is a NLSL Measured and Determined?



Monitoring Timeline

- Utility notifies BPA of a Potential NLSL.
- Utility request a Facility Determination letter from BPA
- BPA sends a response to the request for a Facility Determination letter and request information, including a Plan of Service for the new load
- Utility submits Plan of Service letter to BPA
- BPA conducts site visit(s) of proposed facilities.
- BPA send a Facility Determination letter and the parties establish the monitoring period.
- BPA updates Exhibit A and Exhibit D.
- BPA starts monitoring the load.

Facility Determination

- The statute defines a NLSL as a single facility, so determining what makes up a single facility is very important
 - Facilities Determinations factors to be considered
 - 1. Is the load operated by a single consumer?
 - 2. Is the load at a single location? In a single building?
 - 3. Does the load serve a manufacturing process which produces a single product or type of product?
 - 4. Are separable portions of the load interdependent?
 - 5. Is the load contracted for, billed or served as a single load under the utility's customary billing and service policy?
 - 6. Are there applicable precedents?
 - 7. Any other relevant factors as determined by the Parties

Monitoring Period

Start of Utility Service:

 The date of first utility service to a preexisting load. This option applies in situations in which an existing load of 10 aMW or more is "taken over" in a merger, annexation or similar situation. Here the load is a NLSL from the day the "new" utility begins service.

Initial Energization:

The date of initial energization (for test and start up) with BPA's consent. In this
instance BPA and the utility agree on a date on which the construction at the site is
substantially complete and production equipment is being energized for test and
startup.

Commercial Operation:

The date of commercial operation (actual production).

Alternative Agreed Upon Date:

BPA and the utility agree that the new load will start at 10 aMW or more in its first year
of operation so that the load is subject to NLSL treatment from the date it starts
operating. Load growth measured from date of commercial operation.

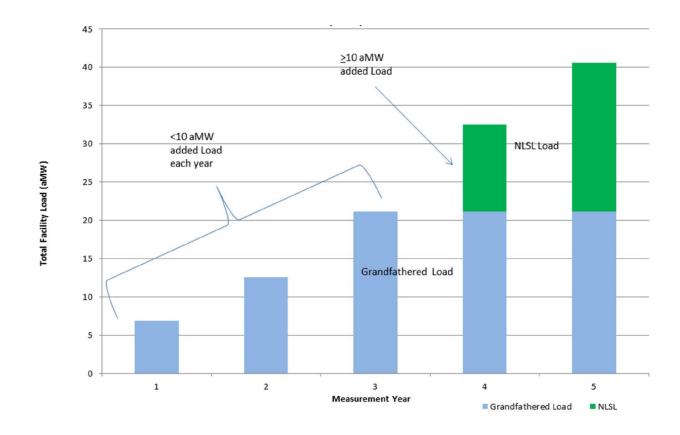
26980182 BPA-2022-0

At the End of a Monitoring Period

- If the facility, as defined in the Facility Determination letter grows by more than 87,600,000 kWh during the year, then the load is a NLSL.
 - BPA sends a letter notifying the utility that their load is an NLSL and updates exhibit D.
- If the facility does not grow by more than 87,600,000 kWh during the year, the load is not a NLSL (yet).
 - BPA continues to monitor the load during the next monitoring period.
 - BPA calculates the Grandfathered Load amount for prior monitoring period.
 - If the load grows by more than 10 aMW above the Grandfathered Load in the following monitoring period, the load becomes an NLSL.

Grandfathered Load

- Grandfathered Load means the cumulative total of the load growth of a Potential NLSL or Planned NLSL which is less than 10 aMW in any 12month monitoring period
- Grandfathered Load is eligible for service at the PF rate.



Planned vs Potential NLSL



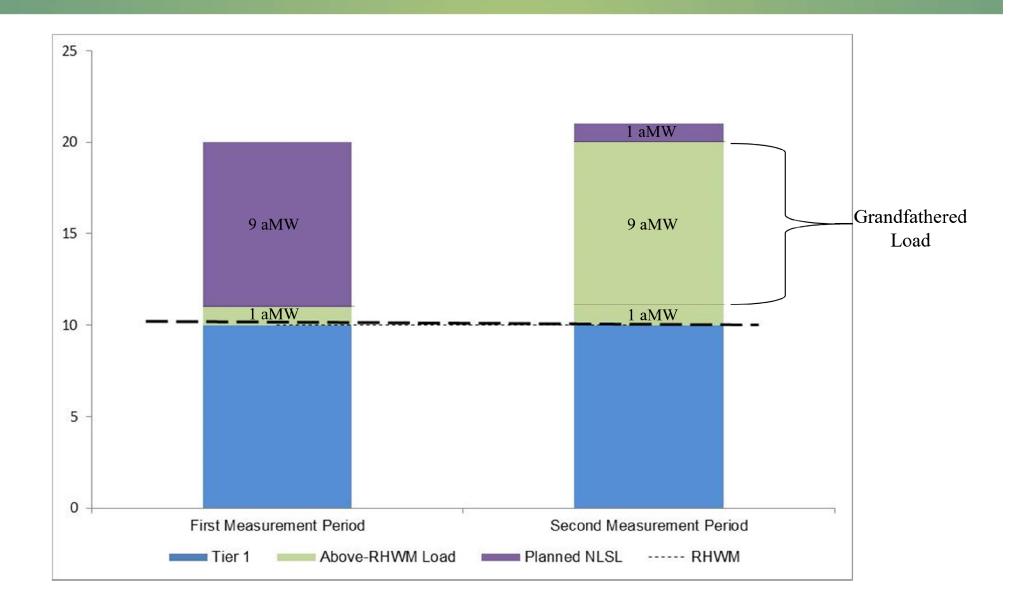
How to Serve the Load Prior to NLSL Determination

- Once a load at a facility is deemed to be a possible NLSL, which will be monitored for NLSL purposes the serving utility must decide how the load to be monitored shall be characterized in the utility's Exhibit D, Section 1.
 - Potential NLSL –Utility and BPA agree the load at the facility is expected to grow by *less* than 10 aMW during the facility's next 12month monitoring period. But, BPA monitors the load because it could grow by 10 aMW or more.
 - Planned NLSL Utility and BPA agree the load at the facility is expected to grow by at least 10 aMW during the facility's next 12month monitoring period. BPA treats the load as if it is an NLSL and then checks to see if it is not.
- Please note that neither Potential NLSL nor Planned NLSLs are in fact NLSLs.

Potential/Planned if Above RHWM

A	bvove RHWM	
	Potential NLSL	Planned NLSL
Served with	PF or Non Federal ¹	Non Federal Resource
Back Bill Possible?	Yes	No
Liquidated Damages Possible?	No	Yes
¹ Service would be based on cust	tomer Above RHWM	lload election.

Grand Father Load and Planned NLSL



Potential/Planned if Below RHWM

В	elow RHWM	
	Potential NLSL	Planned NLSL
Served with	PF	Non Federal Resource
Back Bill Possible?	Yes	No
Liquidated Damages Possible?	No	Yes

Liquated Damages

- Customers will be subject to liquidated damage if the following applies:
 - Customer's load is below its RHWM
 - Customer is serving a Planned NLSL with Non-Federal resources
 - The Planned NLSL does not breach 10 aMW in the given monitoring period
- BPA will charge the customer liquidated damages to recover the revenue for power that the customer otherwise would have purchased from BPA at the PF rate.

Serving a Planned NLSL or NLSL



NR Rate or Non-Federal Resource

- Per the Act, BPA can only serve a NLSL at the New Resources (NR) Rate.
 - In BP-18, the NR rate is about \$80/MWh.
 - As part of the RD power sales contract, Slice/Block and Block waived their right to purchase at the NR rate.
- An utility can elect to serve its NLSL with nonfederal resource not designated to serve other retail load.
- Since BPA treats a Planned NLSL as if it was already an NLSL, a utility can also serve a Planned NLSL load with a non-federal resource.

Non-Federal Resource(s) Used to Serve Planned NLSL or NLSL

- If an utility elects to serve its Planned NLSL or NLSL with non-federal resources, it must dedicate resource(s) equal to the forecasted load for the upcoming monitoring period.
- The forecasted load will subtracted from TRL, along with all existing resources, to calculate the utilities annual Net Requirement. This ensure that no PF power is used to serve the Planned NLSL or NLSL on a planned basis.

Dear «Account Executive»,

«Customer Long Name» («Customer Name») is requesting that BPA make a Facility Determination under BPA's New Large Single Load (NLSL) Policy for the «Name of site and load». The site is and is expected to come online on «Date». Initially, «Name of load» will be capable of consuming «##» MW. Our load forecast for this site was submitted to BPA by email on «Date» and included the amounts that we propose to serve as a Planned NLSL.

. We have included preliminary information to assist BPA in making the Facility Determination for the «Name of site» site as attachments to this letter. We hope that the Facility Determination can be concluded in advance of «Date» so that «Name of load» and «Customer Name» can move ahead with sure knowledge of this load's treatment under BPA's NLSL Policy. To this end, we commit to providing BPA whatever data is requested as quickly as possible.

«Customer Name» intends to bring non-federal resources to serve the NLSL served by «Customer Name».

Information Provided to Aid BPA in the NLSL Facility Determination

1) Whether the load is operated by a single end-use consumer.

Yes, the load at the «Name of site» site is operated by a single end-use customer, «Name of load», a subsidiary of «Name of developer». «Name of load» is a corporation organized under the laws of the «State».

2) Whether the load is in a single location.

«Yes/No», the load is in a single location.

A legal description of the «Name of site» site is as follows:

«A tract of land located in «legal description of site»».

3) Whether the load serves a manufacturing process which produces a single product or type of product.

«Description of sites product and process»

- 4) Whether separable portions of the load are independent.
- 5) Whether the load is contracted for, served or billed as a single load under «Customer Name»'s customary billing and service policy.
- 6) Consideration of facts from previous similar situations.
- 7) Any other factors that Parties deem to be relevant.

From: April Owen

Sent: Wed Sep 01 09:26:54 2021

To: Accounts Receivable FTOA

Cc: Galbraith, Brian T (BPA) - TPCC-TPP-4; Colin Willenbrock; Tyler Whitney

Bcc: ar@bpa.gov

Subject: [EXTERNAL] RE: IMPORTANT: FOR SIGNATURE: L0494_21TP-12420 Pend Oreille County PUD LLISIS

Importance: Normal

Attachments: L0494_21TP-12420_SIS Agreement Final.pdf

Funds for this agreement in the amount of \$30,000 should transfer tomorrow, 9/2/21.

Thank you,

April

April Owen

Director, Audit, Finance & Power Supply

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington | Newport, WA 99156

509.447.9321 | aowen@popud.org | www.popud.org

From: Colin Willenbrock < cwillenbrock@popud.org>

Sent: Monday, August 30, 2021 3:37 PM

To: TPCC Contracts <tpcc contracts@bpa.gov>

Cc: Galbraith, Brian T (BPA) - TPCC-TPP-4 btgalbraith@bpa.gov/10.301/bt/b1.10; Tyler Whitney <TWhitney@popud.org/>; April

Owen <aowen@popud.org>

Subject: RE: IMPORTANT: FOR SIGNATURE: L0494 21TP-12420 Pend Oreille County PUD LLISIS

Please see attached fully executed agreement. Electronic funds transfer per the instructions will be forthcoming.

Thank you,

Colin

F. Colin Willenbrock

General Manager

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156 509.447.3137 | cwillenbrock@popud.org | www.popud.org

From: TPCC_Contracts < tpcc_contracts@bpa.gov >

Sent: Monday, August 30, 2021 7:39 AM

To: Colin Willenbrock < cwillenbrock@popud.org>

Cc: Galbraith, Brian T (BPA) - TPCC-TPP-4 < btgalbraith@bpa.gov>

Subject: IMPORTANT: FOR SIGNATURE: L0494_21TP-12420 Pend Oreille County PUD LLISIS

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The attached contract document requires Pend Oreille County PUD No. 1 signature (E-signature) by Close of Business on **09/20/2021**.

Please E-sign, type your title in the space provided and return to BPA by replying to this email and attaching the E-signed contract document.

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			 				•	

- ü Click the flagged signature field throughout the contract document, insert your E-signature and type in your title.
- ü Save the PDF file for your records (saving is required prior to returning by email to capture your E-signature).
- ü Reply to this email (tpcc_contracts@bpa.gov) by the date stated above and attach your E-signed contract document.

The enclosed cover letter provides further instructions and alternatives. If you have any questions, please contact Adelle Harris at (360) 619-6090.

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Thank you.

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and delete the copy you received.

Pend Oreille County Public Utility District #1

U.S. DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION

AGREEMENT

AGREEMENT NUMBER	2. AGREEMENT EF	FECTIVE FROM DATE IN B	LOCK 4 UNTIL	3. AMENDMENT NO.	4. EFFECTIVE DATE
21TP-12420	See Block #11		-0-	Same as Block #17	
	ISSUED TO		ISSUED BY		
5. ORGANIZATION AND ADDR	ND ADDRESS 6.		6. ORGANIZATION AND ADDRESS		
Pend Oreille County PUD No. 1		U.S. Depar	rtment of Energy		
ATTN: Mr. F. Colin W	· · · · · · · · · · · · · · · · · · ·		Bonneville Power Administration		
PO Box 190		ATTN: Brian Galbraith – TPCC/TPP-4			
Newport, WA 99156-0190		P.O. Box 61409			
			Vancouve	r, WA 98666	
7. TECHNICAL CONTACT		PHONE NUMBER	8. TECHNICAL	CONTACT	PHONE NUMBER
David Hodder	(509) 447-9343		Jared Lac	ambra	(509) 822-4605
9. ADMINISTRATIVE CONTACT		CT PHONE NUMBER		RATIVE CONTACT	PHONE NUMBER
David Hodder	avid Hodder (509) 447-9343		Martin Wi	ck	(360) 619-6818

^{11.} TITLE/BRIEF DESCRIPTION OF WORK TO BE PERFORMED UNDER THIS AGREEMENT

LINE AND LOAD INTERCONNECTION SYSTEM IMPACT STUDY AND ASSOCIATED TASKS FOR INTERCONNECTION REQUEST NO. L0494 – PONDERAY RENEWABLE FIBER AND BLOCKCHAIN PROJECT

Pend Oreille County PUD No. 1 (Pend Oreille) submitted a Line and Load Interconnection request on July 12, 2021, proposing to interconnect 85 MW paper mill load and additional data center load of 215 MW (300 MW total) at the Ponderay newsprint site that connects to BPA's Usk 230 kV Substation. The request has been entered into BPA's Interconnection Queue as Request No. L0494.

In order to assess the impact of this request, the Bonneville Power Administration (BPA) will, at Pend Oreille's expense, perform a Line and Load Interconnection System Impact Study (LLISIS) to assess the impact of the proposed interconnection of Pend Oreille's facilities on BPA's transmission system, and on the transmission systems of any third parties. The LLISIS will identify any system constraints, additional network facilities, and direct assignment facilities required to provide the requested interconnection. The LLISIS evaluation will include, but not be limited to: (i) facility thermal overloads; (ii) voltage support and control problems; (iii) voltage stability problems; (iv) transient stability problems; and (v) dynamic stability problems. The LLISIS will be based upon the results of previously performed studies, where applicable.

The Point of Interconnection to be studied will be BPA's Usk Substation.

BPA estimates that the LLISIS and associated tasks will require 60 days to complete, following BPA's receipt of this fully executed Agreement and associated payment from Pend Oreille.

Termination: This Agreement shall become effective upon execution by both parties and shall terminate upon full performance by both parties of their respective obligations set forth herein, but in no event shall the term of this Agreement exceed five years from its effective date.

The following document is attached to and becomes a part of this Agreement:

• Financial Terms and Conditions Statement

12. AMOUNT TO BE PAID BY BPA	13. AMOUNT TO BE PAID TO BPA
\$	\$30,000 (estimated)
14. SUBMIT SIGNED AGREEMENT TO	15. ACCOUNTING INFORMATION (For BPA Use Only)
U.S. Department of Energy Bonneville Power Administration ATTN: Brian Galbraith - TPCC/TPP-4 P.O. Box 61409 Vancouver, WA 98666	16. SUBMIT INVOICE TO (Name and Address)
PARTICIPANT	ВРА
PARTICIPANT 17. APPROVED BY (Signature) F. Colin Willenbrock Date: 2021.08.30 15:34:18 -07:00' DATE (MM/DD/YY)	BPA 18. APPROVED BY (Signature) Adelle L. Harris 2021.08.30 07:32:55 -07'00' ADATE (MM/DD/YY)
17. APPROVED BY (Signature) F. Colin Willenbrock Date: 2021.08.30 15:34:18	18. APPROVED BY (Signature) Adelle L. Harris (b)(6) DATE (MM/DD/YY) 2021.08.30 07:32:55

BPA's cost of performing the study at Pend Oreille's expense shall be the actual cost of doing the work specified in this Agreement, plus an overhead rate of 35%, representing the indirect costs of the study office plus the contractual support costs of contract negotiation, billing and accounting functions, and contract management.

Pend Oreille hereby agrees to advance \$30,000, the estimated study cost, to BPA upon execution of this Agreement. Payments made to BPA shall be held in an account established for this Agreement.

If BPA needs additional funds to complete the work at any time during performance of the study, BPA may request, in writing, for Pend Oreille to advance such additional funds to BPA for deposit in the account. Pend Oreille shall advance such additional funds within 30 days of BPA's written request, and BPA may temporarily stop work until Pend Oreille supplies the requested funds. If Pend Oreille does not advance such additional funds by the due date or, if at any time before completion of the study Pend Oreille elects to stop work under this Agreement, BPA has the right to cease all work and restore, as a cost to the study at Pend Oreille's expense, government facilities and/or records to their condition prior to the beginning of work under this Agreement.

Within a reasonable time after completion of the study, BPA shall make a full accounting to Pend Oreille showing the actual costs charged against the account. BPA shall either remit any unexpended balance in the account to Pend Oreille or bill for any costs in excess of the deposits in the account. Pend Oreille shall pay any excess costs within 30 days of the invoice date (due date).

Payments not received by the due date will accrue interest on the amount due beginning the first calendar day after the due date to the date paid, at an annual interest rate equal to the higher of i) the prime rate (as reported in the Wall Street Journal in the first issue published during the month in which payment by Pend Oreille is due) plus 4 percent; or ii) such prime rate multiplied by 1.5.

From: Normandeau, Mike (BPA) - PSE-RONAN

Sent: Wed Sep 01 14:12:28 2021

To: Patton,Kathryn B (BPA) - PSS-SEATTLE; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB; Harris,Adelle L (TFE)(BPA) - TSES-TPP-2; Lacambra,Jared M (BPA) - TPCF-MEAD-GOB; April Owen; Moore,Lisa A (BPA) - PSSE-MEAD-GOB

Cc: Diana Jackson; Tyler Whitney

Subject: RE: Touch Base with Pend Oreille PUD

Importance: Normal

Attachments: FY2022 NetRequirement PEND OREILLE Draft at different NLSL loads 210830.xlsx

Here are the three scenarios that we worked through this week.

Thanks Mike

----Original Appointment----

From: Normandeau, Mike (BPA) - PSE-RONAN

Sent: Monday, August 30, 2021 2:10 PM

To: Normandeau,Mike (BPA) - PSE-RONAN; Patton,Kathryn B (BPA) - PSS-SEATTLE; Babaidhan,Sami A

(BPA) - PSSE-MEAD-GOB; Harris, Adelle L (TFE)(BPA) - TSES-TPP-2; Lacambra, Jared M (BPA) - TPCF-MEAD-

GOB; April Owen; Moore, Lisa A (BPA) - PSSE-MEAD-GOB

Cc: Diana Jackson; Tyler Whitney

Subject: Touch Base with Pend Oreille PUD

When: Wednesday, September 1, 2021 3:00 PM-4:00 PM (UTC-07:00) Mountain Time (US & Canada).

Where: 503-230-4000 ID (b)(6)

1

26981217 BPA-2022-00699-F 0540

26981217 BPA-2022-00699-F 0541

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula	
(in annual aMW)		(in annual aMW)	
TRL Forecast 1/	116.349	Gross Requirements 7/	
NLSL Resources 2/	82.401	New Resources 8/	
Existing Resources 3/	26.052	Net Requirements (NR) 9/	
Gross Requirements 4/	7.896		
		Tier 2 Block Amounts 10/	
RHWM 5/	24.581		
		Notes:	
Headroom 6/	16.685	7/ Gross Requirements from Step 1.	
		8/ New Resources equal Above-RHWM Load	
Notes:		Amounts. If customer has New Specified Res	
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gro	
approved by BPA (or BPA forecast i	f customer	the customer's Above-RHWM Load, then the	
submitted forecast deemed not rea	sonable.)	to determine the order of resource removal/	
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block	
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requiren	
not include resources serving NLSLs	. Existing Resources	less New Resources.	
can be removed in the second year	of a Rate Period.	10/T2 Amounts based on customer's elec	
See page 3 for removal of Existing F	desource calculations.	September 30, 2011 Notice Deadline.	
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into section	
Net Requirement calculation (prelin	ninary	T2 Amounts plus T1 Amounts equal Net Requ	
since New Resources to serve Abov	e-RHWM		
Load have not yet been added.)			
5/ RHWM is from RHWM Process C	utputs spreadsheet		
published on September 28, 2012,	with updates		
for Provisional HWM if necessary.			
6/ Headroom, if RHWM is greater t	han Gross Req,		
Above-RHWM Load, if RHWM is les	s than Gross Req.		

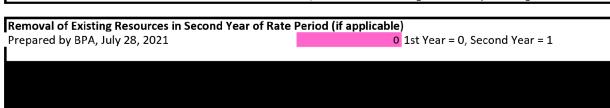
Monthly Net Requirement Calculations (with Block Amounts)

	October	November	December
Hours	744	721	744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	2,352	10,306	9,337
Monthly T2 Block Amounts (MWh)	0	0	0
	13/ Exhibit C, Section	n 1.2.1.4 states that mo	nthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
	14/ Diurnal Shaping I	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

Total - T1 Block Amounts (MW/hr)	3.0	14.0	13.0
HLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0
LLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0
	15/ Shaped within-m	nonth Block Amounts arı	re megawatt per hour
	and rounded to a wh	ole number. Flat within-	month Block Amounts
	rounded to a whole r	number. The diurnal am	ounts go into section :
Tier 1 and Tier 2 Block Amounts (MWh)	2,232	10,094	9,672

TRL Forecast Energy (MWh)	22,160	30,234	37,197
TRL Forecast Peak (MW)	132.6	149.7	157.1
NLSL Resources (MWh)	0	0	0
Existing Resources (MWh)	72,838	52,813	68,195
Monthly Gross Requirements (MWh)	-50,678	-22,579	-30,998
	16/ TRL Forecast subn	nitted by customer and	approved by BPA (or
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e
			·
New Specified Resources (MWh)	0	0	0
, , ,	0 0.000	0 0.000	0.000
New Specified Resources (aMW)		-	-
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000	0.000	0.000
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000	0.000 0	0.000 0 0.000
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (MWh) New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM

Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	0	0
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-41,372	-42,751
Updated Resources Serving NLSL (MWh)	0	0	0
	18/ Original resource	amounts from Exhibit	A. Update NLSL reso
Change to Existing Resources (MWh)	42,751	41,372	46,092
Change to Existing Resources (aMW)	57.461	57.381	61.952
Updated Total Existing Resources (MWh)	72,838	52,813	68,195
Updated Total Existing Resources (aMW)	97.901	73.250	91.660



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ar	2021	202	1 2021
Prepared by BPA, July 28, 2021		10	1	1 12
RHWM	24.581	416	40	0 416
		328	32	1 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	30,234	37,197
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	0	0
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh)	0.11721% 0.11721% -2,175 -930	0.11721% 0.11721% 1,453 1,883	0.11721% 0.11721% 1,629 1,428
FY2022 Tier 1 Power Charges without Low Density L	Discounts or Irrigation Rate	<u> Discounts</u>	

Composite Charge	\$234,234	\$234,234	\$234,234
Non-Slice Charge	(\$38,673)	(\$38,673)	(\$38,673)
Load Shaping - HLH	(\$65,090)	\$46,080	\$63,152
Load Shaping - LLH	(\$26,297)	\$54,875	\$45,777
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$104,174	\$296,516	\$304,490
			_
Steps in calculating Load Shaping Billing Determine	<u>ants</u>		
System Shaped Load HLH (MWh)	3,423	4,147	3,779
System Shaped Load LLH (MWh)	1,914	2,611	2,836
Actual Tier 1 Load HLH (MWh)	1,248	5,600	5,408
Actual Tier 1 Load LLH (MWh)	984	4.494	4.264

tion		Step 3: Critical Slice (in annual aMW)	& Block Amounts (v	vith TOCAs)		
7.896 0.000		Tier 2 Block Amounts Tier 1 Block Amounts		0.000 7.896		
7.896		Net Requirements		7.896		
0.000		TOCAs 12/				
		Sum of RHWM		6736.361		
less T2 ources and eater than		Non-Slice TOCA TOCA		0.11721% 0.11721%		
customer needs T2 remarketing Contract. ent Amounts		Notes: 11/ Tier 1 Block Amounts equal Net Requirement less Tier 2 Amounts. Annual Tier 1 Block Amounts (in aMW) go into section 1.1 of Exhibit C. 12/ TOCA equals minimum of Net Requirement or RHWM,				
n made by the		divided by the Sum of F Non-Slice TOCA equals		VI III CEII 320.		
2.5 of Exhibit C. irements.						
January 744	February 672	March 743	April 720	May 744	June 720	
0.100	0.160	0.450	0.010	0.000	0.000	
0.190	0.168	0.159	0.010	0.000	0.000	
0.190 13,141 0	0.168 11,620 0	0.159 10,997 0	0.010 692 0	0.000 0 0	0.000 0 0	

N/A

N/A

N/A

N/A

N/A

N/A

18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

13,392 11,424 11,145 720 0

99,093	86,780	91,146	102,382	101,336	96,861
200.4	190.8	183.8	175.8	171.9	159.6
63,240	57,120	63,155	79,200	81,840	79,200
3,073	2,574	0	3,802	8,002	6,729
32,780	27,086	27,991	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 27,991 19,380 11,494 10,932

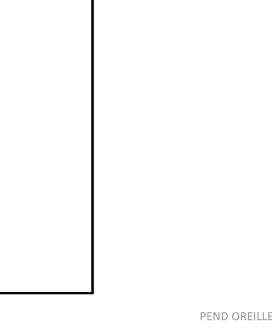
ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct-Dec L	.oad, Jan-Sep Mill on	full, Crypto starts in	April with full ramp	
January	February	March	April	May	June
63,240	57,120	63,155	79,200	81,840	79,200
42,751	38,614	42,751	41,372	42,751	41,372
20,489	18,506	20,404	37,828	39,089	37,828
63,240	57,120	63,155	79,200	81,840	79,200
ces in Exhibit A to mat	ch NLSL forecast.				
-8,158	-4,344	-20,404	-29,566	-34,850	-31,355
-10.965	-6.464	-27.462	-41.064	-46.841	-43.549
3,073	2,574	0	3,802	8,002	6,729
4.130	3.830	0.000	5.281	10.755	9.346
LSL load, then balance	e the single resource am	ounts to match the NLS	SI forecast keeping the	total dedicated amou	ints the same.

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022	2022	2022	2022	2022	2022
1	2	3	4	5	6
400 344	384 288	432 311	416 304	400 344	416 304
344	200	311	304	344	304
00.000	06 700	04.446	402.202	104 225	05.054
99,093 200.391	86,780 190.756	91,146 183.772	102,382 175.781	101,336 171.924	96,861 159.600
63,240	57,120	63,155	79,200	81,840	79,200
11,231	6,918	7,040	33,368	42,852	38,084
0	0	0	0	0	0
42,751 0.190	38,614 0.168	42,751 0.159	41,372 0.010	42,751 0.000	41,372 0.000
0.538	0.571	0.139	0.578	0.538	0.578
0.441	0.425	0.440	0.422	0.462	0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
lanuami	Fobruom/	March	A m mil	May	luno
January 400	February 384	March 432	April 416	May 400	June 416
344	288	311	304	344	304
2,651,580 2,009,470	2,346,690 1,693,144	2,961,839 1,860,906	2,307,314 1,436,906	3,495,710 1,691,935	3,952,933 1,590,174
2,009,470	1,093,144	1,800,900	1,430,900	1,091,933	1,390,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943) \$0	(\$329,943) \$0	(\$329,943) \$0	(\$329,943) \$0	(\$329,943) \$0	(\$329,943) \$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.11721% 0.11721%	0.11721% 0.11721%	0.11721% 0.11721%	0.11721% 0.11721%	0.11721% 0.11721%	0.11721% 0.11721%
0.11721% 4,092	0.11721% 3,777	0.11721% 3,008	0.11721% -2,288	0.11721% -4,097	0.11721% -4,633
3,837	2,911	2,484	-1,380	-1,983	-1,864

\$234,234	\$234,234	\$234,234	\$234,234	\$234,234	\$234,234
(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)
\$140,318	\$131,417	\$82,942	(\$47,393)	(\$66,704)	(\$79,460)
\$99,179	\$82,365	\$70,640	(\$35,416)	(\$32,325)	(\$19,794)
\$0	\$0	\$0	\$0	\$0	\$0
\$435,058	\$409,343	\$349,143	\$112,752	\$96,532	\$96,307
3 108	2 751	3 472	2 704	4.097	4 633
3,108	2,751	3,472	2,704	4,097	4,633
2,355	1,985	2,181	1,684	1,983	1,864
•	,	,	,	,	,



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
2,628	2,697	5,395	69,166	7.896
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				

4.0	4.0	7.0	69,671	7.953
4.0	4.0	7.0		
4.0	4.0	7.0		
hours in the month, inth, l in cell O50.				
2,976	2,976	5,040	69,671	7.953

118,484 161.8	118,223 156.7	115,319 163.8	1,019,214 N/A	116.349 N/A
100,440 3,668 14,376	100,440 3,477 14,306	97,200 3,046 15,073	721,835 228,217 69,162	82.401 26.052 7.896
or additional calculat quirements.	,	20,070	55,252	,,,,,,
0	0	0	0	0.000
0.000 0	0.000 0	0.000 0	0	0.000
0.000	0.000	0.000		
ıts will be added.				
14,376	14,306	15,073	69,162	7.896

July	August	September	ANNUAL	aMW
100,440	100,440	97,200	721,835	82.401
42,751	42,751	41,372	503,359	57.461
57,689	57,689	55,828	218,476	24.940
100,440	100,440	97,200	721,835	82.401
40.545	40.575	44.202	47.045	5 470
-19,615	-18,575	-11,293	-47,945	<i>-5.473</i>
-26.364	-24.966	-15.685		
3,668	3,477	3,046	228,217	26.052
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	202 40 32	9 Annual 0	aMW
118,484 161.786 100,440 23,283 0 42,751 0.038 0.538 0.441	118,223 156.652 100,440 22,052 0 42,751 0.039 0.581 0.441	115,319 163.785 97,200 14,339 0 41,372 0.078 0.556 0.444	1,019,214 721,835 262,798 0 503,359 1.000	116.349 82.401 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.11721% 0.11721% -2,509 -684	0.11721% 0.11721% -2,287 -699	0.11721% 0.11721% -716 247		

\$234,234	\$234,234	\$234,234	\$2,810,808	
(\$38,673)	(\$38,673)	(\$38,673)	(<mark>\$464,076)</mark>	
(\$92,392)	(\$82,026)	(\$20,153)	\$10,691	
(\$14,612)	(\$18,763)	\$7,146	\$212,775	
\$0	\$0	\$0	\$0	
\$88,557	\$94,772	\$182,554	\$2,570,198	
4,109	4,015	3,516	43,753	9
2,060	1,947	1,993	25,413	7
1,600	1,728	2,800	39,008	8
1,376	1,248	2,240	30,663	8

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	105.281	Gross Requirements 7/
NLSL Resources 2/	71.333	New Resources 8/
Existing Resources 3/	27.594	Net Requirements (NR) 9/
Gross Requirements 4/	6.354	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	18.227	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Re
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast i	f customer	the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	sonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs		less New Resources.
can be removed in the second year	of a Rate Period.	10/ T2 Amounts based on customer's electio
See page 3 for removal of Existing F		September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	•	If T2 Amounts, then amounts go into section
Net Requirement calculation (prelin	,	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C	• •	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	.,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

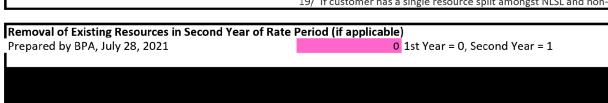
Monthly Net Requirement Calculations (with Block Amounts)

	October	November	December
Hours	744	721	744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	1,892	8,293	7,514
Monthly T2 Block Amounts (MWh)	0	0	0
	13/ Exhibit C, Section	n 1.2.1.4 states that mo	onthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

3.0	12.0	10.0
3.0	12.0	10.0
3.0	12.0	10.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within	-month Block Amounts
rounded to a whole no	umber. The diurnal an	nounts go into section :
2,232	8,652	7,440
	3.0 3.0 15/ Shaped within-mand rounded to a whole no	3.0 12.0 3.0 12.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal and

ecified Resources Amounts)	
22,160 132.6	44,654 149.7	52,077 157.1
0 72.838	14,420 38.393	14,880 53,315
-50,678	-8,159	-16,118
•	•	, , ,
0	0	0
0.000 0	0.000 0	0.000 0
·		
(50,678)	(8,159)	(16,118)
	22,160 132.6 0 72,838 -50,678 16/ TRL Forecast subm Existing Resources from 0 0.000 0 0.000 17/ New Specified Resources then customer may do	22,160

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	14,420	14,880
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	-27,871
Updated Resources Serving NLSL (MWh)	0	14,420	14,880
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoui
Change to Existing Resources (MWh)	42,751	26,952	31,212
Change to Existing Resources (aMW)	57.461	37.381	41.952
Updated Total Existing Resources (MWh)	72,838	38,393	53,315
Updated Total Existing Resources (aMW)	97.901	53.250	71.660
	19/ If customer has a	single resource split ar	mongst NLSL and non-N



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	202	1 2021
Prepared by BPA, July 28, 2021		10	1	.1 12
RHWM	24.581	416	40	0 416
		328	32	1 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	52,077
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	14,880
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh)	0.09432% 0.09432% -1,507 -556	0.09432% 0.09432% 1,463 1,751	0.09432% 0.09432% 1,119 998
FY2022 Tier 1 Power Charges without Low Density D	Discounts or Irrigation Rate	<u> Discounts</u>	

Composite Charge	\$188,491	\$188,491	\$188,491
Non-Slice Charge	(\$31,120)	(\$31,120)	(\$31,120)
Load Shaping - HLH	(\$45,086)	\$46,392	\$43,382
Load Shaping - LLH	(\$15,729)	\$51,025	\$31,989
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$96,556	\$254,788	\$232,742
Steps in calculating Load Shaping Billing Determ	<u>inants</u>		
System Shaped Load HLH (MWh)	2,755	3,337	3,041
System Shaped Load LLH (MWh)	1,540	2,101	2,282
Actual Tier 1 Load HLH (MWh)	1,248	4,800	4,160
Actual Tier 1 Load LLH (MWh)	984	3.852	3,280

		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
6.354 0.000 6.354	- -	Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 6.354 6.354	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
ess T2 ources and ater than customer needs '2 remarketing		Non-Slice TOCA TOCA Notes: 11/ Tier 1 Block Amoun			
Contract. ent Amounts		Annual Tier 1 Block Am 12/ TOCA equals minim	um of Net Requirem	ent or RHWM,	t C.
made by the		divided by the Sum of F Non-Slice TOCA equals		M in cell J18.	
2.5 of Exhibit C. irements.					
January 744	February 672	March 743	April 720	May 744	June 720
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			-	
-	· · · · · · · · · · · · · · · · · · ·			-	
0.190 10,575	0.168 9,351	0.159 8,850	0.010 557	0.000 0	720
0.190 10,575 0	0.168 9,351 0	0.159	0.010 557 0	0.000 0 0	0.000 0 0

14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mo 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculatec

10,416 9,408 8,916 720

50,733	96,860	102,291	95,182	93,896	89,661
200.4	190.8	183.8	175.8	171.9	159.6
14,880	67,200	74,300	72,000	74,400	72,000
39,102	2,574	2,846	3,802	11,203	7,456
-3,249	27,086	25,145	19,380	8,293	10,205

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

(3,249)27,086 25,145 19,380 8,293 10,205

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

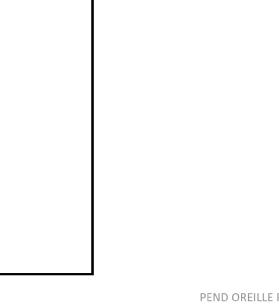
	Revised: No Oct Lo	oad, Mill starts in Fe	b, Crypto flat at 20 M	1W starting Nov	
January	February	March	April	May	June
14,880	67,200	74,300	72,000	74,400	72,000
42,751	38,614	42.751	41,372	42,751	41,372
-27,871	28,586	31,549	30,628	31,649	30,628
14,880	67,200	74,300	72,000	74,400	72,000
rces in Exhibit A to mat	ch NLSL forecast.				
27,871	-4,344	-4,194	-29,566	-31,649	-30,628
37.461	-6.464	-5.645	-41.064	-42.539	-42.539
39,102	2,574	2,846	3,802	11,203	7,456
52.556	3.830	3.830	5.281	15.058	10.356
NLSL load, then balance	the single resource amo	ounts to match the NLS	SL forecast keeping the	total dedicated amou	unts the same.

26981218 BPA-2022-00699-F 0562

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

	2022 2022 1 2		2022 4	2022 5	2022 6
	400 384 344 288		416 304	400 344	416 304
50,733 200.391 14,880 11,231 0 42,751 0.190 0.538 0.441	96,860 190.756 67,200 6,918 0 38,614 0.168 0.571	102,291 183.772 74,300 7,040 0 42,751 0.159 0.581 0.440	95,182 175.781 72,000 33,368 0 41,372 0.010 0.578 0.422	93,896 171.924 74,400 42,852 0 42,751 0.000 0.538 0.462	89,661 159.600 72,000 38,084 0 41,372 0.000 0.578 0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January	February	March	April	May	June
400	384	432	416	400	416
344	288	311	304	344	304
2,651,		2,961,839	2,307,314	3,495,710	3,952,933
2,009,		1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417		\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)		(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0		\$0	\$0	\$0	\$0
\$34.29		\$27.57	\$20.71	\$16.28	\$17.15
\$25.85		\$28.44	\$25.66	\$16.30	\$10.62
\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
3,099	3,163	2,390	-1,760	-3,297	-3,728
2,921	2,435	1,977	-1,051	-1,596	-1,500

\$188,491 (<mark>\$31,120)</mark> \$106,266	\$188,491 <mark>(\$31,120)</mark> \$110.027	\$188,491 <mark>(\$31,120)</mark> \$65,903	\$188,491 (\$31,120) (\$36,455)	\$188,491 (\$31,120) (\$53,678)	\$188,491 (\$31,120) (\$63,942)
\$75,499	\$68,887	\$56,220	(\$26,976)	(\$26,012)	(\$15,928)
\$0	\$0	\$0	\$0	\$0	\$0
\$339,136	\$336,285	\$279,494	\$93,940	\$77,681	\$77,501
					_
2,501	2,213	2,794	2,176	3,297	3,728
2,501 1,895	2,213 1,597	2,794 1,755	2,176 1,355	3,297 1,596	3,728 1,500
•	,	•	,	,	,



PEND OREILLE PUD, page 2

July 744	August 744	September 720	ANNUAL 8,760	aMW
0.030	0.020	0.079	1.000	
0.038	0.039	0.078	1.000	6.254
2,115	2,171	4,341	55,658	6.354
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.	•			

3.0	3.0	6.0	56,568	6.458
3.0	3.0	6.0		
3.0	3.0	6.0		
hours in the month, inth, I in cell O50.				
2,232	2,232	4,320	56,568	6.458

92,444 161.8	92,183 156.7	90,119 163.8	922,259 N/A	105.281 N/A
74,400 3,668 14,376	74,400 3,477 14,306	72,000 3,046 15,073	624,880 241,720 55,659	71.333 27.594 6.354
or additional calculati	,	15,575	33,033	0.55 /
0 0.000	0.000	0 0.000	0	0.000
0	0	0	0	0.000
0.000 I, its will be added.	0.000	0.000		
14,376	14,306	15,073	55,659	6.354

July	August	September	ANNUAL	aMW
74,400	74,400	72,000	624,880	71.333
42,751	42,751	41,372	503,359	57.461
31,649	31,649	30,628	121,521	13.872
74,400	74,400	72,000	624,880	71.333
-19,615	-18,575	-11,293	-21,078	-2.406
-26.364	-24.966	-15.685		
3,668	3,477	3,046	241,720	27.594
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	202 40 32	9 Annual 0	aMW
92,444 161.786 74,400 23,283 0 42,751 0.038 0.538 0.441	92,183 156.652 74,400 22,052 0 42,751 0.039 0.581 0.441	90,119 163.785 72,000 14,339 0 41,372 0.078 0.556 0.444	922,259 624,880 262,798 0 503,359 1.000	105.281 71.333 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July 400 344 3,505,339 1,757,589	August 432 312 3,425,259 1,660,955	September 400 320 2,999,685 1,700,508	ANNUAL 4912 3848 37,328,957 21,681,545	<i>aMW</i> 7,599.543 5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.09432% 0.09432% -2,106 -626	0.09432% 0.09432% -1,935 -631	0.09432% 0.09432% -429 316		

\$188,491	\$188,491	\$188,491	\$2,261,892	
(\$31,120)	(\$31,120)	(\$31,120)	(\$373,440)	
(\$77,573)	(\$69,398)	(\$12,085)	\$13,753	
(\$13,366)	(\$16,932)	\$9,151	\$177,828	
\$0	\$0	\$0	\$0	
\$66,432	\$71,041	\$154,437	\$2,080,033	
3,306	3,231	2,829	35,209	7
1,658	1,567	1,604	20,450	5
1,200	1,296	2,400	31,680	6
1,032	936	1,920	24,888	6

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	145.895	Gross Requirements 7/
NLSL Resources 2/	111.947	New Resources 8/
Existing Resources 3/	17.315	Net Requirements (NR) 9/
Gross Requirements 4/	16.633	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	<u>7.948</u>	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Re
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gre
approved by BPA (or BPA forecast i		the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	asonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh		9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	J.	less New Resources.
can be removed in the second year		10/ T2 Amounts based on customer's electio
See page 3 for removal of Existing I		September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	•	If T2 Amounts, then amounts go into section
Net Requirement calculation (preli	•	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	re-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C		
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	.,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

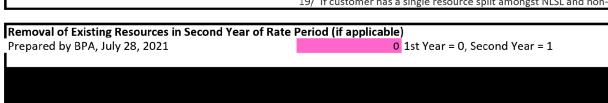
Monthly Net Requirement Calculations (with Block Amounts)

Hours	October 744	November 721	December 744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	4,954	21,710	19,670
Monthly T2 Block Amounts (MWh)	0	0	0
	13/ Exhibit C, Section	n 1.2.1.4 states that mo	nthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
	14/ Diurnal Shaping I	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

7.0	30.0	26.0
7.0	30.0	26.0
7.0	30.0	26.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within-	-month Block Amounts
rounded to a whole no	ımber. The diurnal am	nounts go into section :
5,208	21,630	19,344
	7.0 7.0 15/ Shaped within-moand rounded to a whole no	7.0 30.0 7.0 30.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal am

TRL Forecast Energy (MWh)	22,160	44,654	115,317
TRL Forecast Peak (MW)	132.6	149.7	157.1
NLSL Resources (MWh)	0	14,420	78,120
Existing Resources (MWh)	72,838	38,393	3,234
Monthly Gross Requirements (MWh)	-50,678	-8,159	33,963
	16/ TRL Forecast submitted by customer and approved by BPA (or		
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e
New Specified Resources (MWh)	0	0	0
. , ,	0 0.000	0 0.000	0 0.000
New Specified Resources (aMW)		-	-
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000	0.000	0.000
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (MWh) New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWI

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021				
	October	November	December	
NLSL Forecast (MWh)	0	14,420	78,120	
Resources Serving an NLSL (MWh)	42,751	41,372	42,751	
Change to NLSL Resources (MWh)	-42,751	-26,952	35,369	
Updated Resources Serving NLSL (MWh)	O	14,420	78,120	
	18/ Original resource amounts from Exhibit A. Update NLSL resour			
Change to Existing Resources (MWh)	42,751	26,952	-18,869	
Change to Existing Resources (aMW)	57.461	37.381	-25.362	
Updated Total Existing Resources (MWh)	72,838	38,393	3,234	
Updated Total Existing Resources (aMW)	97.901	53.250	4.347	
	19/ If customer has a	single resource split a	mongst NLSL and non-N	



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ar	2021	20	21 2021
Prepared by BPA, July 28, 2021		10		11 12
RHWM	24.581	416	4	00 416
		328	3	21 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	115,317
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	78,120
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh)	0.24691% 0.24691% -4,300 -1,736	0.24691% 0.24691% 3,264 4,130	0.24691% 0.24691% 2,856 2,554
FY2022 Tier 1 Power Charges without Low Density Disc	counts or Irrigation Rate	e Discounts	

Composite Charge	\$493,429	\$493,429	\$493,429
Non-Slice Charge	(\$81,466)	(\$81,466)	(\$81,466)
Load Shaping - HLH	(\$128,648)	\$103,516	\$110,696
Load Shaping - LLH	(\$49,087)	\$120,351	\$81,869
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$234,228	\$635,830	\$604,528
Steps in calculating Load Shaping Billing Determinants			
Steps in calculating Load Shaping Billing Determinants System Shaped Load HLH (MWh)	7,212	8,736	7,960
	7,212 4,032	8,736 5,500	7,960 5,974
System Shaped Load HLH (MWh)	•	,	,

ation		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
16.633 0.000 16.633	- -	Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 16.633 16.633	
0.000	I	TOCAs 12/			
		Sum of RHWM		6736.361	
less T2 ources and ater than		Non-Slice TOCA TOCA		0.24691% 0.24691%	
customer needs T2 remarketing Contract. ent Amounts		Notes: 11/ Tier 1 Block Amoun Annual Tier 1 Block Am 12/ TOCA equals minim divided by the Sum of F Non-Slice TOCA equals	ounts (in aMW) go in num of Net Requiremo RHWM. Sum of RHW	to section 1.1 of Exhibi ent or RHWM,	
2.5 of Exhibit C. irements.					
January 744	February 672	March 743	April 720	May 744	June 720
0.190	0.168	0.159	0.010	0.000	0.000
27,684	24,478	23,167	1,457	0	0
0	0	0	0	0	0
nts in MWh are equal	to the Monthly Shap	ing Factors * Annual Tier 1	. Block Amounts in aN	1W (see Step 3) * Hour	s in Fiscal Year
N/A	N/A	N/A	N/A	N/A	N/A

37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

27,528 24,192 23,033 1,440 0

113,973	100,220	134,983	126,862	126,632	121,341
200.4	190.8	183.8	175.8	171.9	159.6
78,120	70,560	106,992	103,680	107,136	103,680
3,073	2,574	2,846	3,802	8,002	6,729
32,780	27,086	25,145	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 25,145 19,380 11,494 10,932

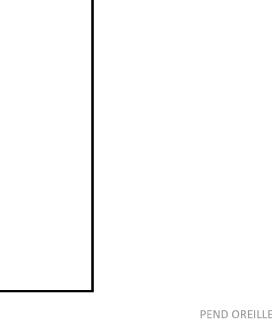
ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct Lo	oad, Mill starts in Dec	cember, Crypto ramp	up starting Nov						
January	February	March	April	May	June					
78,120	70,560	106,992	103,680	107,136	103,680					
42,751	38,614	42,751	41,372	42,751	41,372					
35,369	31,946	64,241	62,308	64,385	62,308					
78,120	70,560	106,992	103,680	107,136	103,680					
rces in Exhibit A to mat	ch NLSL forecast.									
-8,158	-4,344	-4,194	-29,566	-34,850	-31,355					
-10.965	-6.464	-5.645	-41.064	-46.841	-43.549					
3,073	2,574	2,846	3,802	8,002	6,729					
4.130	3.830	3.830	5.281	10.755	9.346					
NLSL load, then balance	the single resource am	ounts to match the NLS	SL forecast keeping the	NLSL load, then balance the single resource amounts to match the NLSL forecast keeping the total dedicated amounts the same.						

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

202 40 34	1 2 0 384	2022 3 432 311	2022 4 416 304	2022 5 400 344	2022 6 416 304
113,973 200.391 78,120 11,231 0 42,751 0.190 0.538 0.441	100,220 190.756 70,560 6,918 0 38,614 0.168 0.571	134,983 183.772 106,992 7,040 0 42,751 0.159 0.581 0.440	126,862 175.781 103,680 33,368 0 41,372 0.010 0.578 0.422	126,632 171.924 107,136 42,852 0 42,751 0.000 0.538 0.462	121,341 159.600 103,680 38,084 0 41,372 0.000 0.578 0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January		March	April	May	June
400		432	416	400	416
344		311	304	344	304
2,651,580		2,961,839	2,307,314	3,495,710	3,952,933
2,009,470		1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
8,253	8,030	6,079	-4,865	-8,631	-9,760
7,766	6,187	5,046	-2,940	-4,178	-3,926

\$493,429 (\$81,466) \$282,995 \$200,762	\$493,429 (\$81,466) \$279,356 \$175,043	\$493,429 (\$81,466) \$167,596 \$143,515	\$493,429 (\$81,466) (\$100,754) (\$75,437)	\$493,429 (\$81,466) (\$140,517) (\$68,094)	\$493,429 (\$81,466) (\$167,387) (\$41,697)
\$0	\$0	\$0	\$0	\$0	\$0
\$895,720	\$866,362	\$723,074	\$235,772	\$203,352	\$202,879
6,547	5,794	7,313	5,697	8,631	9,760
6,547 4,962	5,794 4,181	7,313 4,595	5,697 3,548	8,631 4,178	9,760 3,926
,	,	,	•	,	,



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
5,537	5,682	11,365	145,704	16.633
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				

7.0	8.0	16.0	145,055	16.559
7.0	8.0	16.0		
7.0	8.0	16.0		
hours in the month, inth, I in cell O50.				
5,208	5,952	11,520	145,055	16.559

125,180 161.8	124,919 156.7	121,799 163.8	1,278,039 N/A	145.895 N/A
107,136 3,668	107,136 3,477	103,680 3,046	980,660 151,682	111.947 17.315
14,376 or additional calculat	14,306 ions.	15,073	145,697	16.633
quirements.				
0.000	0 0.000	0 0.000	0	0.000
0 0.000	0 0.000	0 0.000	0	0.000
l, ıts will be added.				
14,376	14,306	15,073	145,697	16.633

July	August	September	ANNUAL	aMW
107,136	107,136	103,680	980,660	111.947
42,751	42,751	41,372	503,359	57.461
64,385	64,385	62,308	477,301	54.486
107,136	107,136	103,680	980,660	111.947
10.615	10 575	11 202	111 116	12 604
-19,615	-18,575	-11,293	-111,116	-12.684
-26.364	-24.966	-15.685		
3,668	3,477	3,046	151,682	17.315
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	2023 9 400 320	9 Annual O	aMW
125,180 161.786 107,136 23,283 0 42,751 0.038 0.538 0.441	124,919 156.652 107,136 22,052 0 42,751 0.039 0.581 0.441	121,799 163.785 103,680 14,339 0 41,372 0.078 0.556 0.444	1,278,039 980,660 262,798 0 503,359 1.000	145.895 111.947 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.24691% 0.24691% -5,855 -1,932	0.24691% 0.24691% -5,001 -1,605	0.24691% 0.24691% -1,007 921		

\$493,429	\$493,429	\$493,429	\$5,921,148	
(\$81,466)	(\$81,466)	(\$81,466)	(\$977,592)	
(\$215,641)	(\$179,397)	(\$28,334)	(\$16,519)	
(\$41,260)	(\$43,096)	\$26,671	\$429,540	
\$0	\$0	\$0	\$0	
\$155,062	\$189,470	\$410,300	\$5,356,577	
8,655	8,457	7,407	92,169	19
4,340	4,101	4,199	53,534	14
2,800	3,456	6,400	81,232	17
2,408	2,496	5,120	63,823	17

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cald (in annual aMW)	culation	Step 2: Annual Net Requirement Ca (in annual aMW)	lculation
TRL Forecast 1/	139.851	Gross Requirements 7/	26.544
NLSL Resources 2/	105.904	New Resources 8/	1.963
Existing Resources 3/	7.403	Net Requirements (NR) 9/	24.581
Gross Requirements 4/	26.544		
•		Tier 2 Block Amounts 10/	0.000
RHWM 5/	24.581		
		Notes:	
Above-RHWM Load 6/	1.963	7/ Gross Requirements from Step 1.	
		8/ New Resources equal Above-RHWM	Load less T2
Notes:		Amounts. If customer has New Specifie	d Resources and
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amou	nt greater than
approved by BPA (or BPA forecast is	f customer	the customer's Above-RHWM Load, the	n the customer needs
submitted forecast deemed not rea	sonable.)	to determine the order of resource rem	oval/T2 remarketing
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/B	Block Contract.
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requ	uirement Amounts
not include resources serving NLSLs	s. Existing Resources	less New Resources.	
can be removed in the second year	of a Rate Period.	10/ T2 Amounts based on customer's ele	ection made by the
See page 3 for removal of Existing F	Resource calculations.	September 30, 2011 Notice Deadline.	
4/ Gross Requirements is a prelimin	nary	If T2 Amounts, then amounts go into sec	
Net Requirement calculation (prelin	ninary	T2 Amounts plus T1 Amounts equal Net	Requirements.
since New Resources to serve Abov	e-RHWM		
Load have not yet been added.)			
5/ RHWM is from RHWM Process C	Outputs spreadsheet		
published on September 28, 2012, v	with updates		
for Provisional HWM if necessary.			
6/ Headroom, if RHWM is greater t	"		
Above-RHWM Load, if RHWM is les	s than Gross Reg.		

Monthly Net Requirement Calculations (with Block Amounts) Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	January 744	February 672
Step 4: Monthly Tier 1 Block Amount Calculati	ons				
Monthly Block Shaping Factors	0.034	0.149	0.135	0.190	0.168
Monthly T1 Block Amounts (MWh)	7,321	32,084	29,069	40,913	36,175
Monthly T2 Block Amounts (MWh)	0	0	0	0	0
		n 1.2.1.4 states that mo n Exhibit C, Section 1.2.		unts in MWh are equal	to the Monthly Shapi
Diurnal Shaping Factors					
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
	14/ Diurnal Shaping I	Factors per Exhibit C, Se	ection 1.2.2.4 if custom	er elected Tier 1 Block	within-month shaped
Total - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
HLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
.H - T1 Block Amounts (MW/hr) H - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
LLH - 11 Block Amounts (WW/III)	15/ Shaped within-m and rounded to a who	nonth Block Amounts ar ole number. Flat within	re megawatt per hour -month Block Amounts	amounts equal to the i are megawatt per hou	monthly MWh amoun ur amounts equal to th
• • • •	15/ Shaped within-m and rounded to a who	onth Block Amounts ar	re megawatt per hour -month Block Amounts	amounts equal to the i are megawatt per hou	monthly MWh amour ur amounts equal to t
Tier 1 and Tier 2 Block Amounts (MWh)	15/ Shaped within-m and rounded to a who rounded to a whole n 7,440	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724	re megawatt per hour -month Block Amounts nounts go into section :	amounts equal to the I are megawatt per hou L.3 of Exhibit C. Due to	monthly MWh amoun ur amounts equal to th o rounding the total m
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns	15/ Shaped within-mand rounded to a who rounded to a whole note of the following specified Resources Amount 80,313	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350	amounts equal to the is are megawatt per hou. I.3 of Exhibit C. Due to 40,920	monthly MWh amoun ur amounts equal to the prounding the total m 36,288
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW)	15/ Shaped within-mand rounded to a whole nounded t	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (s) 86,590 149.7	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350 157.1	amounts equal to the interpretation and are megawatt per hour and the following states are megawatt per hour and are megaw	monthly MWh amoun ur amounts equal to the prounding the total muse 36,288
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (ss) 86,590 149.7 56,356	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350 157.1 58,153	amounts equal to the is are megawatt per hou. I.3 of Exhibit C. Due to 40,920 121,605 200.4 85,752	monthly MWh amoun ur amounts equal to the prounding the total muse 36,288 107,113 190.8 77,453
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (s) 86,590 149.7 56,356 2,905	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350 157.1 58,153 10,042	amounts equal to the is are megawatt per hou. I.3 of Exhibit C. Due to 40,920 121,605 200.4 85,752 3,073	monthly MWh amoun ar amounts equal to the crounding the total must assume the second s
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (ss) 86,590 149.7 56,356	95,350 157.1 58,153 10,042 27,155 I approved by BPA (or I	amounts equal to the interest and are megawatt per hour interest and a second and a	nonthly MWh amoun ar amounts equal to the prounding the total must assume that a second secon
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 ss) 86,590 149.7 56,356 2,905 27,329 mitted by customer and	95,350 157.1 58,153 10,042 27,155 I approved by BPA (or I	amounts equal to the interest and are megawatt per hour interest and a second and a	nonthly MWh amount or amounts equal to the orounding the total management 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approv
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 ss) 86,590 149.7 56,356 2,905 27,329 mitted by customer and om Exhibit A. Monthly of	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or I	amounts equal to the interest and the state of Exhibit C. Due to 40,920 121,605 200.4 85,752 3,073 32,780 BPA forecast if customicals TRL less NLSLs and	nonthly MWh amounts ar amounts equal to the prounding the total means and a second sec
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh)	15/ Shaped within-mand rounded to a whole nounded t	anonth Block Amounts are sole number. Flat within number. The diurnal am 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 I approved by BPA (or I	amounts equal to the is are megawatt per hould be are to a solution of the are megawatt per hould be are also and a solution of the are are are are are are are are are ar	nonthly MWh amoun ar amounts equal to the crounding the total must a 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approved Exisiting Resources.

	'				st dedicate New Specifie oad. If New Specified Re
Net Requirement Forecast (MWh)	6,015	25,914	25,695	31,320	25,767
	18/ Net Requirements	equals TRL less NLS	s, Existing Resources, Ne	ew Resources (Specifi	ed and Unspecified), and

	October	November	December	January	February
NLSL Forecast (MWh)	58,153	56,356	58,153	85,752	77,453 [°]
Resources Serving an NLSL (MWh)	42,751	41,372	42,751	42,751	38,614
Change to NLSL Resources (MWh)	15,402	14,984	15,402	43,001	38,839
Updated Resources Serving NLSL (MWh)	58,153	56,356	58,153	85,752	77,453
	18/ Original resource	e amounts from Exhibit	A. Update NLSL resour	rces in Exhibit A to ma	tch NLSL forecast.
Change to Existing Resources (MWh)	-15,402	-8,536	-12,061	-8,158	-4,344
Change to Existing Resources (aMW)	-20.702	-11.839	-16.212	-10.965	-6.464
Updated Total Existing Resources (MWh)	14,685	2,905	10,042	3,073	2,574
Updated Total Existing Resources (aMW)	19.737	4.029	13.497	4.130	3.830
	19/ If customer has a	a single resource split a	mongst NLSL and non-N	NLSL load, then balanc	e the single resoui
Removal of Existing Resources in Second Year of	Rate Period (if applicable	e)			
iternoval of Existing Resources in Second Tear of					

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is applicable for customers that have Existing Resour

that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's forecast of Customer's Net Requirement for each

Customer Specific Data for Fiscal Year 2021 2021 2022 2022

Prepared by BPA, July 28, 2021 RHWM	24.581	10 416 328	11 400 321	12 416 328	1 400 344	2 384 288
BES Number	10306					
T2 Block Amounts	0					
TRL Forecast - Energy (MWh)		80,313	86,590	95,350	121,605	107,113
TRL Forecast - Peak (MW)		132.585	149.663	157.084	200.391	190.756
NLSL Forecast		58,153	56,356	58,153	85,752	77,453
Existing		30,087	11,441	22,103	11,231	6,918
New		0	0	0	0	0
NLSL		42,751	41,372	42,751	42,751	38,614
Block Shaping Factors		0.034	0.149	0.135	0.190	0.168
HLH Shaping Factors		0.559	0.555	0.559	0.538	0.571
LLH Shaping Factors		0.419	0.445	0.462	0.441	0.425
Existing Resource Removal Shape		0.119	0.039	0.084	0.037	0.020
New Resource Removal Shape		0.000	0.000	0.000	0.000	0.000

Customer Charges and Load Shaping Charges Prepared by BPA, July 28, 2021

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328	January 400 344	February 384 288
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335	2,651,580 2,009,470	2,346,690 1,693,144
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.29 \$25.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.79 \$28.29 \$0.00
<u>FY2022 Billing Determinants</u> TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%

Non-Slice TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%
Load Shaping - HLH (MWh)	-6,498	4,690	4,460	12,324	12,173
Load Shaping - LLH (MWh)	-2,679	5,996	3,964	11,587	9,374
FY2022 Tier 1 Power Charges without Low Density Disc	ounts or Irrigation Ro	ate Discounts			
Composite Charge	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222
Non-Slice Charge	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)
Load Shaping - HLH	(\$194,419)	\$148,721	\$172,873	\$422,603	\$423,496
Load Shaping - LLH	(\$75,744)	\$174,720	\$127,041	\$299,535	\$265,183
Financial Reserves Policy Surcharge	\$0	\$0	\$0	\$0	\$0
Total	\$338,663	\$932,267	\$908,740	\$1,330,964	\$1,297,505
Steps in calculating Load Shaping Billing Determinants					
System Shaped Load HLH (MWh)	10,658	12,910	11,764	9,676	8,563
System Shaped Load LLH (MWh)	5,959	8,128	8,828	7,333	6,178
Actual Tier 1 Load HLH (MWh)	4,160	17,600	16,224	22,000	20,736
Actual Tier 1 Load LLH (MWh)	3,280	14,124	12,792	18,920	15,552

Step 3: Critical Slice & Block Amounts (with TOCAs)

(in annual aMW)

 Tier 2 Block Amounts
 0.000

 Tier 1 Block Amounts 11/
 24.581

 Net Requirements
 24.581

TOCAs 12/

Sum of RHWM 6736.361

Non-Slice TOCA 0.36490% TOCA 0.36490%

Notes:

11/ Tier 1 Block Amounts equal Net Requirement less Tier 2 Amounts. Annual Tier 1 Block Amounts (in aMW) go into section 1.1 of Exhibit C. 12/ TOCA equals minimum of Net Requirement or RHWM, divided by the Sum of RHWM. Sum of RHWM in cell J18.

Non-Slice TOCA equals TOCA.

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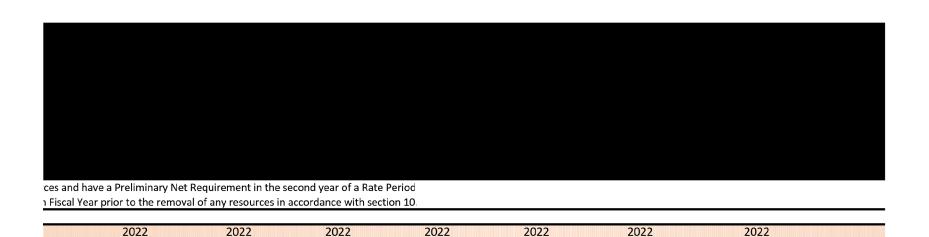
March 743	April 720	May 744	June 720	July 744	August 744	September 720	8,760
0.159	0.010	0.000	0.000	0.038	0.039	0.078	1.000
34,237	2,153	0	0	8,183	8,398	16,796	215,330
0	0	0	0	0	0	0	0
ctors * Annual Tier	1 Block Amounts in aN	ЛW (see Step 3) * Hou	ırs in Fiscal Year				
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
eir Net Requireme	nt. Not applicable to cu	ustomers who elected	l flat Tier 1 block with	in-month shape.			
46.6				44.0	44.0		244.654
46.0	3.0	0.0	0.0	11.0	11.0 11.0	23.0	214,654
					11 ()		
46.0	3.0	0.0	0.0	11.0		23.0	
46.0 46.0	3.0	0.0	0.0	11.0	11.0	23.0	
46.0 46.0 culated per 1.2.14	3.0 of Exhibit C multiplied	0.0 by the diurnal shapinք	0.0 g factor, divided by th	11.0 e hours in the month,			
46.0 46.0 culated per 1.2.14 onthly MWh amoun	3.0 of Exhibit C multiplied late calculated per 1.2.1	0.0 by the diurnal shapinរ 4 of Exhibit C divided	0.0 g factor, divided by th by the hours in the m	11.0 e hours in the month, onth,			
46.0 46.0 culated per 1.2.14 onthly MWh amoun	3.0 of Exhibit C multiplied	0.0 by the diurnal shapinถ 4 of Exhibit C divided	0.0 g factor, divided by th by the hours in the m	11.0 e hours in the month, onth,			
46.0 46.0 culated per 1.2.14 on thly MWh amoun att-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.	11.0	23.0	214.654
46.0 46.0 culated per 1.2.14 onthly MWh amoun	3.0 of Exhibit C multiplied late calculated per 1.2.1	0.0 by the diurnal shapinถ 4 of Exhibit C divided	0.0 g factor, divided by th by the hours in the m	11.0 e hours in the month, onth,			214,654
46.0 46.0 culated per 1.2.14 on thly MWh amoun att-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.	11.0	23.0	214,654
46.0 46.0 culated per 1.2.14 on thly MWh amoun att-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.	11.0	23.0	214,654
46.0 46.0 culated per 1.2.14 on thly MWh amoun att-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.	11.0	23.0	214,654
46.0 46.0 culated per 1.2.14 on thly MWh amoun att-hours establish 34,178	3.0 of Exhibit C multiplied I nts calculated per 1.2.1 ed in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, conth, ed in cell 050. 8,184	8,184	23.0 16,560	
46.0 46.0 ulated per 1.2.14 on thly MWh amoun att-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.	11.0	23.0	1,225,094
46.0 46.0 ulated per 1.2.14 on the per 1.2.14 on	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, conth, ed in cell 050. 8,184	11.0 8,184 103,535	16,560 101,104 163.8	
46.0 46.0 ulated per 1.2.14 on the per 1.2.14 on	3.0 of Exhibit C multiplied I nts calculated per 1.2.1 ed in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0 100,646 159.6	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8	11.0 8,184 103,535 156.7	23.0 16,560 101,104	1,225,094 N/A
46.0 46.0 culated per 1.2.14 on the per 1.2.14 o	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985	1,225,094 N/A 927,715
46.0 46.0 culated per 1.2.14 on the per 1.2.14 o	3.0 of Exhibit C multiplied Into calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,094 N/A 927,715 64,848
46.0 46.0 culated per 1.2.14 on the per 1.2.14 o	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,094 N/A 927,715 64,848
46.0 46.0 culated per 1.2.14 on the per 1.2.14 o	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,094 N/A 927,715 64,848 232,531
46.0 46.0 culated per 1.2.14 on the per 1.2.14 o	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into arces if customer has A	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculated 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula dequirements.	11.0 8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,094 N/A 927,715 64,848
46.0 46.0 culated per 1.2.14 on the per 1.2.14 o	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into urces if customer has A	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculated 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, bonth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula dequirements.	8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,094 N/A 927,715 64,848 232,531

ed Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Load, esources were not added to serve Above-RHWM Load, then Unspecified Resource Amounts will be added.

23,686	17,966	10,034	9,518	12,916	12,846	13,659	215,335
d plus T2 Amounts. Net I	Requirements goes in	to section 1.2 of Exhib	oit A.				

PEND OREILLE PUD, page 3

March	April	May	June	July	August	September	ANNUAL
85,636	82,985	85,752	82,985	85,752	85,752	82,985	927,715
42,751	41,372	42,751	41,372	42,751	42,751	41,372	503,359
42,885	41,613	43,001	41,613	43,001	43,001	41,613	424,356
85,636	82,985	85,752	82,985	85,752	85,752	82,985	927,715
-4,194	-29,566	-34,850	-31,355	-19,615	-18,575	-11,293	-197,950
-5.645	-41.064	-46.841	-43.549	-26.364	-24.966	-15.685	
2,846	3,802	8,002	6,729	3,668	3,477	3,046	64,848
3.830	5.281	10.755	9.346	4.930	4.673	4.231	



3	4	5	6	7	8	9 Ar	nnual
432	416	400	416	400	432	400	
311	304	344	304	344	312	320	
113,627 183,772 85,636 7,040 0 42,751 0.159 0.581 0.440	106,167 175.781 82,985 33,368 0 41,372 0.010 0.578 0.422	105,248 171.924 85,752 42,852 0 42,751 0.000 0.538 0.462	100,646 159.600 82,985 38,084 0 41,372 0.000 0.578 0.422	103,796 161.786 85,752 23,283 0 42,751 0.038 0.538 0.441	103,535 156.652 85,752 22,052 0 42,751 0.039 0.581 0.441	101,104 163,785 82,985 14,339 0 41,372 0.078 0.556 0.444	1,225,094 927,715 262,798 0 503,359 1.000
0.019	0.133	0.173	0.154	0.089	0.084	0.051	1.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
					PEN	ND OREILLE PUD, page	e 4
March	April	May	June	July	August	September	ANNUAL
432	416	400	416	400	432	400	4912
311	304	344	304	344	312	320	3848
2,961,839	2,307,314	3,495,710	3,952,933	3,505,339	3,425,259	2,999,685	37,328,957
1,860,906	1,436,906	1,691,935	1,590,174	1,757,589	1,660,955	1,700,508	21,681,545
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$27.57	\$20.71	\$16.28	\$17.15	\$36.83	\$35.87	\$28.15	
\$28.44	\$25.66	\$16.30	\$10.62	\$21.36	\$26.85	\$28.95	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	

0.36490% 9,064 7,516	0.36490% -7,171 -4,331	0.36490% -12,756 -6,174	0.36490% -14,424 -5,803	0.36490% -8,391 -2,629	0.36490% -7,747 -2,629	0.36490% -1,746 1,155	
\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$8,750,664
(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$1,444,752)
\$249,901	(\$148,519)	(\$207,665)	(\$247,376)	(\$309,040)	(\$277,877)	(\$49,146)	(\$16,448)
\$213,742	(\$111,140)	(\$100,634)	(\$61,623)	(\$56,165)	(\$70,584)	\$33,433	\$637,764
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,072,469	\$349,167	\$300,527	\$299,827	\$243,621	\$260,365	\$593,113	\$7,927,228
10,808	8,419	12,756	14,424	12,791	12,499	10,946	136,213
6,790	5,243	6,174	5,803	6,413	6,061	6,205	79,116
19,872	1,248	0	0	4,400	4,752	9,200	120,192
14,306	912	0	0	3,784	3,432	7,360	94,462

aMW

24.581 0.000

24.504

24.504

139.851 N/A 105.904 7.403 26.544

1.963

0.000

24.581

aMW 105.904

57.461 48.442 105.904

-22.597

7.403



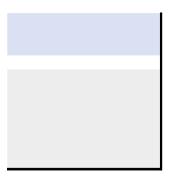
aMW

139.851

105.904 30.000 0.000 57.461

aMW

7,599.543 6736 5,634.497



From: April Owen
Sent: Wed Sep 01 15:02:15 2021
To: Patton,Kathryn B (BPA) - PSS-SEATTLE
Cc: Normandeau,Mike (BPA) - PSE-RONAN; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB
Bcc: mrnormandeau@bpa.gov; sababaidhan@bpa.gov
Subject: [EXTERNAL] FW: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx
Importance: Normal
Attachments: FY2022_NetRequirement_PEND_OREILLE_Draft at different NLSL loads_210830.xlsx
Kate,
I wanted to double-check my numbers on one last scenario, which is just like scenario 3 except that the mill starts in November:
<u>Oct</u>
Nov
<u>Dec</u>
<u>Jan</u>
<u>Feb</u>
1

<u>Mar</u>

<u>Apr</u>

<u>May</u>

<u>June</u>

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

0

85

85

85

85

85

85

85

2

26980375 BPA-2022-00699-F 0604

Total additional load

We will meet either today or tomorrow to make a final decision and get back to you.

Thanks,
April.
From: Patton,Kathryn B (BPA) - PSS-SEATTLE ksent: Monday, August 30, 2021 11:11 AM">ksperit Monday, August 30, 2021 11:11 AM To: April Owen aowen@popud.org Cc: Normandeau,Mike (BPA) - PSE-RONAN mrnormandeau@bpa.gov ; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB sababaidhan@bpa.gov Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx
Hello April,
The attached has Scenario 3.
Annual Net Requirement: 16.633
Monthly Block Amounts:
October
November
December

January

February

March

April

May

June

July

August

September

5,208

21,630

19,344

27,528

24,192

23,033

1,440

0

5,208

5,952

11,520

Monthly Power Costs:

\$234,228

\$635,830

\$604,528

\$895,720

\$866,362

\$723,074

\$235,772

\$203,352

\$202,879

\$155,062

\$189,470

\$410,300

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

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From: April Owen aowen@popud.org
Sent: Monday, August 30, 2021 10:45 AM

To: Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov>

Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov >; Babaidhan, Sami A (BPA) - PSSE-

MEAD-GOB < sababaidhan@bpa.gov >

Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Good morning Kate,

8

I was wondering where to go next when I got the notification from Andres, so thank you for running the numbers! That was very helpful, as I was not correctly incorporating in my estimates how the months with zero NLSL reduced the overall Net Requirements annual average. Could you run one more scenario for me?

<u>Oct</u> Nov Dec <u>Jan</u> <u>Feb</u> Mar <u>Apr</u> May <u>June</u> <u>July</u> <u>Aug</u> Sept Mill Operations (NLSL)

9

Cryptomining (New NLSL)

Total additional load

144
144
144
144
144
We are meeting with the customer this afternoon, so I am hoping to be able to get back to everyone on our fina number tomorrow. Thanks for all the help!
April.
From: Patton,Kathryn B (BPA) - PSS-SEATTLE kbpatton@bpa.gov Sent: Monday, August 30, 2021 10:16 AM To: April Owen aowen@popud.org ; Cicarelli,Andres A (BPA) - KSL-BELL-1 aacicarelli@bpa.gov Cc: Normandeau,Mike (BPA) - PSE-RONAN mrnormandeau@bpa.gov ; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB sababaidhan@bpa.gov > Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx
Hello April,

26980375 BPA-2022-00699-F 0613

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Just to let you know Andres retired on Friday. Mike is working with our forecasting manager to find out who will be covering his accounts.
In the meantime I was able to mock up new Net Requirement calculations based on your two scenarios. You can reference attached to see the specifics but here is how it breaks down.
Scenario 1:
Annual aMW Net Requirement: 7.896 aMWs
Monthly Block amounts:
October
November
December
January
February
March
April

May

June

July

August

September

2,232

10,094

9,672

13,392

11,424

11,145

720

0

0

2,976

2,976

14

Monthly Total Power Costs:

\$104,174

\$296,516

\$304,490

\$435,058

\$409,343

\$349,143

\$112,752

\$96,532

\$96,307

\$88,557

\$94,772

\$182,554

Scenario 2:

Annual aMW Net Requirement: 6.354 aMWs
Monthly Block amounts:
October
November
December
January
February
March
April
May
June
July
August
September
2,232
8,652
7,440

16

10,416

9,408

8,916

720

0

0

2,232

2,232

4,320

Monthly Total Power Costs:

\$96,556

\$254,788

\$232,742

\$339,136

\$336,285

\$279,494

17

\$93,940 \$77,681 \$77,501 \$66,432 \$71,041 \$154,437

Please let me know if you have any questions.

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

<u>cid:image001.jpg@01D52C3E.DF0B9390cid:image008.jpg@01D52C3E.09FCE1E0cid:image009.jpg@01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0</u>

18

From: April Owen <aowen@popud.org> **Sent:** Friday, August 27, 2021 4:05 PM To: Cicarelli, Andres A (BPA) - KSL-BELL-1 < aacicarelli@bpa.gov > Cc: Normandeau, Mike (BPA) - PSE-RONAN mrnormandeau@bpa.gov; Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov> Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx Hi Andres, Mike and Kate and I discussed the Net Requirements process, as BPA transmission will need to perform studies at the mill site that will delay their start date. We discussed running through some scenarios to see what difference it made (if any) on the Net Requirements calculation. Not sure if you are the right person for this, but started with you! Here's what I would like to test: Oct Nov Dec Jan

26980375 BPA-2022-00699-F 0620

Feb

<u>Mar</u>

<u>Apr</u>

<u>May</u>

<u>June</u>

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

0

0

0

85

85

85

85

85

20

Total additional load

<u>Oct</u>

Nov <u>Dec</u> <u>Jan</u> <u>Feb</u> <u>Mar</u> <u>Apr</u> <u>May</u> <u>June</u> <u>July</u> <u>Aug</u> <u>Sept</u> Mill Operations (NLSL) 0 0 0 0

80

23

Total additional load

Let me know if I should run this through someone else. Again, I am looking to see if it changes what our annual Net Requirements will be. Otherwise, we will stick with what you have outlined below.
Thanks!
April.
April Owen
Director, Audit, Finance & Power Supply
Public Utility District No. 1 of Pend Oreille County
P.O. Box 190 130 N. Washington Newport, WA 99156
26

509.447.9321 | aowen@popud.org | www.popud.org

From: Cicarelli, Andres A (BPA) - KSL-BELL-1 < aacicarelli@bpa.gov >

Sent: Friday, August 20, 2021 12:09 PM **To**: April Owen <aowen@popud.org>

Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

Subject: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi April,

Attached is the revised FY2022 forecast for Pend Oreille based on the PUD's comments. Any thoughts?

Talk to you later,

Andres

27

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Pend Oreille County Public Utility District #1

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FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	116.349	Gross Requirements 7/
NLSL Resources 2/	82.401	New Resources 8/
Existing Resources 3/	26.052	Net Requirements (NR) 9/
Gross Requirements 4/ 7.896		
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	16.685	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Res
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast i	fcustomer	the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	sonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	. Existing Resources	less New Resources.
can be removed in the second year	of a Rate Period.	10/T2 Amounts based on customer's electio
See page 3 for removal of Existing F	lesource calculations.	September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into section
Net Requirement calculation (prelin	ninary	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C	utputs spreadsheet	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	han Gross Req,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

Monthly Net Requirement Calculations (with Block Amounts)

Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	2,352	10,306	9,337
Monthly T2 Block Amounts (MWh)	0	0	0
	13/ Exhibit C, Section	n 1.2.1.4 states that mo	nthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
l ' ' ' ' '	14/ Diurnal Shaping I	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

Total - T1 Block Amounts (MW/hr)	3.0	14.0	13.0	
HLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0	
LLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0	
	15/ Shaped within-month Block Amounts arre megawatt per hour			
	and rounded to a whole number. Flat within-month Block Amounts			
	rounded to a whole n	umber. The diurnal am	ounts go into section :	
Tier 1 and Tier 2 Block Amounts (MWh)	2,232	10,094	9,672	

TRL Forecast Energy (MWh)	22,160	30,234	37,197		
TRL Forecast Peak (MW)	132.6	149.7	157.1		
NLSL Resources (MWh)	0	0	0		
Existing Resources (MWh)	72,838	52,813	68,195		
Monthly Gross Requirements (MWh)	-50,678	-22,579	-30,998		
	16/ TRL Forecast submitted by customer and appro				
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e		
New Specified Resources (MWh)	0	0	0		
New Specified Resources (MWh) New Specified Resources (aMW)	0.000	0.000	0 0.000		
, , ,		-	-		
New Specified Resources (aMW)	0.000	0.000	0.000		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000	0.000 0	0.000 0 0.000		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000	0.000 0 0.000 o serve Above-RHWM		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM		

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
NLSL Forecast (MWh)	October	November	December
	0	0	0
Resources Serving an NLSL (MWh) Change to NLSL Resources (MWh) Updated Resources Serving NLSL (MWh)	42,751 -42,751 0	41,372 -41,372 0	42,751 -42,751 0 A. Update NLSL resoui
Change to Existing Resources (MWh) Change to Existing Resources (aMW) Updated Total Existing Resources (MWh)	42,751	41,372	46,092
	57.461	57.381	61.952
	72,838	52,813	68,195
Updated Total Existing Resources (aMW)	97.901	73.250	91.660
	19/ If customer has a	single resource split a	mongst NLSL and non-N

opauteu rotur Existing resources (unit)	37.301	, 5.256	31.000
	19/ If customer has a	single resource split a	mongst NLSL and non-N
Removal of Existing Resources in Second Year	of Rate Period (if applicable)		
Prepared by BPA, July 28, 2021	0	1st Year = 0, Secon	d Year = 1

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	2021	2021
Prepared by BPA, July 28, 2021		10	11	12
RHWM	24.581	416	400	416
		328	321	328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	30,234	37,197
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	0	0
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
[0.110	0.020	0.004
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

Prepared by BPA, July 28, 2021

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790	3,537,945	3,223,873
	1,633,134	2,227,488	2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh) FY2022 Tier 1 Power Charges without Low Density Dis	0.11721%	0.11721%	0.11721%
	0.11721%	0.11721%	0.11721%
	-2,175	1,453	1,629
	-930	1,883	1,428

Composite Charge	\$234,234	\$234,234	\$234,234
Non-Slice Charge	(\$38,673)	(\$38,673)	(\$38,673)
Load Shaping - HLH	(\$65,090)	\$46,080	\$63,152
Load Shaping - LLH	(\$26,297)	\$54,875	\$45,777
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$104,174	\$296,516	\$304,490
Steps in calculating Load Shaping Billing Determ	<u>ninants</u>		
System Shaped Load HLH (MWh)	3,423	4,147	3,779
System Shaped Load LLH (MWh)	1,914	2,611	2,836
Actual Tier 1 Load HLH (MWh)	1,248	5,600	5,408
Actual Tier 1 Load LLH (MWh)	984	4,494	4,264

on		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
7.896		Tier 2 Block Amounts		0.000	
0.000		Tier 1 Block Amounts	11/	7.896	
7.896	-	Net Requirements	11/	7.896	
7.830	:	Net Requirements		7.830	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
ess T2		Non-Slice TOCA		0.11721%	
ources and		TOCA		0.11721%	
ater than					
customer needs		Notes:			
Γ2 remarketing		11/ Tier 1 Block Amount	ts equal Net Requirer	ment less Tier 2 Amour	nts.
Contract.		Annual Tier 1 Block Amo	ounts (in aMW) go in	to section 1.1 of Exhibi	t C.
ent Amounts		12/ TOCA equals minim	um of Net Requireme	ent or RHWM,	
		divided by the Sum of R	HWM. Sum of RHWI	M in cell J18.	
made by the		Non-Slice TOCA equals	TOCA.		
2.5 of Exhibit C.					
irements.					
January	February	March	April	May	June
711	672	743	720	744	720
744					
744					
0.190	0.168	0.159	0.010	0.000	0.000
	0.168 11,620	0.159 10,997	0.010 692	0.000 0	0.000 0

26980382

N/A

N/A

N/A

N/A

N/A

N/A

18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

13,392 11,424 11,145 720 0

99,093	86,780	91,146	102,382	101,336	96,861
200.4	190.8	183.8	175.8	171.9	159.6
63,240	57,120	63,155	79,200	81,840	79,200
3,073	2,574	0	3,802	8,002	6,729
32,780	27,086	27,991	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 27,991 19,380 11,494 10,932

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct-Dec L	oad, Jan-Sep Mill on	full, Crypto starts in	April with full ramp	0
January	February	March	April	May	June
63,240	57,120	63,155	79,200	81,840	79,200
42,751	38,614	42,751	41,372	42,751	41,372
20,489	18,506	20,404	37,828	39,089	37,828
63,240	57,120	63,155	79,200	81,840	79,200
rces in Exhibit A to mat	tch NLSL forecast.				
-8,158	-4,344	-20,404	-29,566	-34,850	-31,355
-10.965	-6.464	-27.462	-41.064	-46.841	-43.549
3,073	2,574	0	3,802	8,002	6,729
4.130	3.830	0.000	5.281	10.755	9.346
IISI load then balance	e the single resource am	ounts to match the NIS	I forecast keening the	total dedicated amou	ints the same

NLSE load, then balance the single resource amounts to match the NLSE forecast keeping the total dedicated amounts the same

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022		2022	2022	2022	2022
1 400	384	3 432	4 416	5 400	6 416
344	288	311	304	344	304
99,093 200.391 63,240 11,231 0 42,751 0.190 0.538 0.441	86,780 190.756 57,120 6,918 0 38,614 0.168 0.571	91,146 183.772 63,155 7,040 0 42,751 0.159 0.581 0.440	102,382 175.781 79,200 33,368 0 41,372 0.010 0.578 0.422	101,336 171,924 81,840 42,852 0 42,751 0.000 0.538 0.462	96,861 159.600 79,200 38,084 0 41,372 0.000 0.578 0.422
0.037 0.000	0.020 0.000	0.019 0.000	0.133 0.000	0.173 0.000	0.154 0.000
January 400	February 384	March 432	April 416	May 400	June 416
344	288	311	304	344	304
2,651,580 2,009,470	2,346,690 1,693,144	2,961,839 1,860,906	2,307,314 1,436,906	3,495,710 1,691,935	3,952,933 1,590,174
\$1,998,417 (\$329,943) \$0 \$34.29 \$25.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.79 \$28.29 \$0.00	\$1,998,417 (\$329,943) \$0 \$27.57 \$28.44 \$0.00	\$1,998,417 (\$329,943) \$0 \$20.71 \$25.66 \$0.00	\$1,998,417 (\$329,943) \$0 \$16.28 \$16.30 \$0.00	\$1,998,417 (\$329,943) \$0 \$17.15 \$10.62 \$0.00
0.11721% 0.11721% 4,092 3,837	0.11721% 0.11721% 3,777 2,911	0.11721% 0.11721% 3,008 2,484	0.11721% 0.11721% -2,288 -1,380	0.11721% 0.11721% -4,097 -1,983	0.11721% 0.11721% -4,633 -1,864

\$234,234	\$234,234	\$234,234	\$234,234	\$234,234	\$234,234
(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)
\$140,318	\$131,417	\$82,942	(\$47,393)	(\$66,704)	(\$79,460)
\$99,179	\$82,365	\$70,640	(\$35,416)	(\$32,325)	(\$19,794)
\$0	\$0	\$0	\$0	\$0	\$0
\$435,058	\$409,343	\$349,143	\$112,752	\$96,532	\$96,307
3 108	2 751	3 472	2 704	4 097	4 633
3,108 2,355	2,751 1 985	3,472 2.181	2,704 1,684	4,097 1 983	4,633 1 864
2,355	1,985	2,181	1,684	1,983	1,864
,	,	,	,	,	,

PEND OREILLE PUD, page 2

July 744	August 744	September 720	ANNUAL 8,760	aMW
0.038 2,628 0	0.039 2,697 0	0.078 5,395 0	1.000 69,166 0	7.896 0.000
N/A N/A n-month shape.	N/A N/A	N/A N/A		

4.0	4.0	7.0	69,671	7.953
4.0	4.0	7.0		
4.0	4.0	7.0		
hours in the month, onth, I in cell O50.				
2,976	2,976	5,040	69,671	7.953

118,484 161.8	118,223 156.7	115,319 163.8	1,019,214 N/A	116.349 N/A
100,440	100,440	97,200	721,835	82.401
3,668 14,376	3,477 14,306	3,046 15,073	228,217 69,162	26.052 7.896
or additional calculati quirements.	ons.			
			•	
0 0.000	0 0.000	0 0.000	0	0.000
0.000	0 0.000	0 0.000	0	0.000
l,	0.000	0.000		
its will be added.				
14,376	14,306	15,073	69,162	7.896

July	August	September	ANNUAL	aMW
100,440	100,440	97,200	721,835	82.401
42,751	42,751	41,372	503,359	57.461
57,689	57,689	55,828	218,476	24.940
100,440	100,440	97,200	721,835	82.401
10.615	10 575	11 202	47.045	F 472
-19,615	-18,575	-11,293	-47,945	-5.473
-26.364	-24.966	-15.685		
3,668	3,477	3,046	228,217	26.052
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	2022 9 400 320	9 Annual O	aMW
118,484 161.786 100,440 23,283 0 42,751 0.038 0.538	118,223 156.652 100,440 22,052 0 42,751 0.039 0.581 0.441	115,319 163.785 97,200 14,339 0 41,372 0.078 0.556 0.444	1,019,214 721,835 262,798 0 503,359 1.000	116.349 82.401 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.11721% 0.11721% -2,509 -684	0.11721% 0.11721% -2,287 -699	0.11721% 0.11721% -716 247		

\$234,234 (\$38,673) (\$92,392) (\$14,612) \$0 \$88,557	\$234,234 (\$38,673) (\$82,026) (\$18,763) \$0 \$94,772	\$234,234 (\$38,673) (\$20,153) \$7,146 \$0 \$182,554	\$2,810,808 (\$464,076) \$10,691 \$212,775 \$0 \$2,570,198	
4,109	4,015	3,516	43,753	9
2,060	1,947	1,993	25,413	7
1,600	1,728	2,800	39,008	8
1,376	1,248	2,240	30,663	8

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	105.281	Gross Requirements 7/
NLSL Resources 2/	71.333	New Resources 8/
Existing Resources 3/	27.594	Net Requirements (NR) 9/
Gross Requirements 4/	6.354	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	18.227	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Re
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast i	f customer	the customer's Above-RHWM Load, then the
submitted forecast deemed not reasonable.)		to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	s. Existing Resources	less New Resources.
can be removed in the second year	of a Rate Period.	10/T2 Amounts based on customer's electio
See page 3 for removal of Existing F	Resource calculations.	September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into section
Net Requirement calculation (preli	minary	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C	Outputs spreadsheet	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	han Gross Req,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

Monthly Net Requirement Calculations (with Block Amounts)

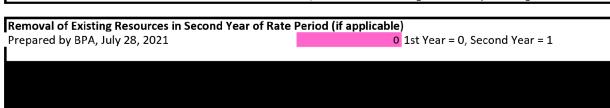
Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744		
Step 4: Monthly Tier 1 Block Amount Calculations					
Monthly Block Shaping Factors	0.034	0.149	0.135		
Monthly T1 Block Amounts (MWh)	1,892	8,293	7,514		
Monthly T2 Block Amounts (MWh)	0	0	0		
	13/ Exhibit C, Section 1.2.1.4 states that monthly Tier 1 Block amount				
	Shaping Factors are in	n Exhibit C, Section 1.2.	13		
Diurnal Shaping Factors					
Monthly Block HLH Shaping Factors	N/A	N/A	N/A		
Monthly Block LLH Shaping Factors	N/A	N/A	ν/A		
, , , , , ,	14/ Diurnal Shaping I	Factors per Exhibit C, Se	ection 1.2.2.4 if custom		

3.0	12.0	10.0
3.0	12.0	10.0
3.0	12.0	10.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within	-month Block Amounts
rounded to a whole no	umber. The diurnal an	nounts go into section :
2,232	8,652	7,440
	3.0 3.0 15/ Shaped within-mand rounded to a whole no	3.0 12.0 3.0 12.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal and

TRL Forecast Energy (MWh)	22,160	44,654	52,077	
TRL Forecast Peak (MW)	132.6	149.7	157.1	
NLSL Resources (MWh)	0	14,420	14,880	
Existing Resources (MWh)	72,838	38,393	53,315	
Monthly Gross Requirements (MWh)	-50,678	-8,159	-16,118	
	16/ TRL Forecast submitted by customer and approved by BPA (or I			
	Existing Resources from	m Exhibit A. Monthly (Gross Requirements e	
New Specified Resources (MWh)	0	0	0	
New Specified Resources (aMW)	0.000	0.000	0.000	
. , ,	0.000 0	0.000 0	0.000 0	
Unspecified Resource Amts (MWh)				
Unspecified Resource Amts (MWh)	0	0.000	0.000	
Unspecified Resource Amts (MWh)	0 0.000	0 0.000 souces can be added to	0 0.000 o serve Above-RHWM	
New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0 0.000 17/ New Specified Res	0 0.000 souces can be added to	0 0.000 o serve Above-RHWM	

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
NLSL Forecast (MWh)	October 0	November 14.420	December 14,880
INLSE POLECASE (INIWIT)	U	14,420	14,000
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	-27,871
Updated Resources Serving NLSL (MWh)	0	14,420	14,880
	18/ Original resource	amounts from Exhibit	A. Update NLSL resou
Change to Existing Resources (MWh)	42,751	26,952	31,212
Change to Existing Resources (aMW)	57.461	37.381	41.952
Updated Total Existing Resources (MWh)	72,838	38,393	53,315
Updated Total Existing Resources (aMW)	97.901	53.250	71.660
1	19/ If customer has a	single resource split a	mongst NLSL and non-I



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	202	1 2021
Prepared by BPA, July 28, 2021		10	1	.1 12
RHWM	24.581	416	40	0 416
		328	32	1 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	52,077
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	14,880
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

Prepared by BPA, July 28, 2021

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790	3,537,945	3,223,873
	1,633,134	2,227,488	2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.00	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh) FY2022 Tier 1 Power Charges without Low Density Dis	0.09432%	0.09432%	0.09432%
	0.09432%	0.09432%	0.09432%
	-1,507	1,463	1,119
	-556	1,751	998

Composite Charge	\$188,491	\$188,491	\$188,491
Non-Slice Charge	(\$31,120)	(\$31,120)	(\$31,120)
Load Shaping - HLH	(\$45,086)	\$46,392	\$43,382
Load Shaping - LLH	(\$15,729)	\$51,025	\$31,989
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$96,556	\$254,788	\$232,742
Steps in calculating Load Shaping Billing Determi	<u>inants</u>		
System Shaped Load HLH (MWh)	2,755	3,337	3,041
System Shaped Load LLH (MWh)	1,540	2,101	2,282
Actual Tier 1 Load HLH (MWh)	1,248	4,800	4,160
Actual Tier 1 Load LLH (MWh)	984	3,852	3,280

tion		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
6.354 0.000 6.354		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 6.354 6.354	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
less T2 ources and ater than		Non-Slice TOCA TOCA		0.09432% 0.09432%	
customer needs T2 remarketing Contract. ent Amounts		Notes: 11/ Tier 1 Block Amount Annual Tier 1 Block Amo 12/ TOCA equals minim divided by the Sum of R Non-Slice TOCA equals 1	ounts (in aMW) go in um of Net Requirem HWM. Sum of RHW	to section 1.1 of Exhibi ent or RHWM,	
2.5 of Exhibit C. irements.					
January	February	March	April	May	
744	672	743	720	744	June 720
744			720		720
0.190	0.168	0.159	0.010	0.000 0	720
744			720	0.000	720
0.190 10,575 0	0.168 9,351 0	0.159 8,850	0.010 557 0	0.000 0 0	0.000 0 0

14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

10,416 9,408 8,916 720 0

50,733	96,860	102,291	95,182	93,896	89,661
200.4	190.8	183.8	175.8	171.9	159.6
14,880	67,200	74,300	72,000	74,400	72,000
39,102	2,574	2,846	3,802	11,203	7,456
-3,249	27,086	25,145	19,380	8,293	10,205

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

(3,249) 27,086 25,145 19,380 8,293 10,205

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct Lo	oad, Mill starts in Fe	b, Crypto flat at 20 M	1W starting Nov	
January	February	March	April	May	June
14,880	67,200	74,300	72,000	74,400	72,000
42,751	38,614	42.751	41,372	42,751	41,372
-27,871	28,586	31,549	30,628	31,649	30,628
14,880	67,200	74,300	72,000	74,400	72,000
rces in Exhibit A to mat	ch NLSL forecast.				
27,871	-4,344	-4,194	-29,566	-31,649	-30,628
37.461	-6.464	-5.645	-41.064	-42.539	-42.539
39,102	2,574	2,846	3,802	11,203	7,456
52.556	3.830	3.830	5.281	15.058	10.356
NLSL load, then balance	the single resource amo	ounts to match the NLS	SL forecast keeping the	total dedicated amou	unts the same.

26980382 BPA-2022-00699-F 0650

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

	22 2022	2022	2022	2022	2022
	1 2	3	4	5	6
	00 384	432	416	400	416
	44 288	311	304	344	304
50,733 200.391 14,880 11,231 0 42,751 0.190 0.538 0.441	96,860 190.756 67,200 6,918 0 38,614 0.168 0.571	102,291 183.772 74,300 7,040 0 42,751 0.159 0.581 0.440	95,182 175.781 72,000 33,368 0 41,372 0.010 0.578 0.422	93,896 171.924 74,400 42,852 0 42,751 0.000 0.538 0.462	89,661 159.600 72,000 38,084 0 41,372 0.000 0.578 0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January		March	April	May	June
400		432	416	400	416
344		311	304	344	304
2,651,58		2,961,839	2,307,314	3,495,710	3,952,933
2,009,47		1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
3,099	3,163	2,390	-1,760	-3,297	-3,728
2,921	2,435	1,977	-1,051	-1,596	-1,500

\$188,491	\$188,491	\$188,491	\$188,491	\$188,491	\$188,491
(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)
\$106,266	\$110,027	\$65,903	(\$36,455)	(\$53,678)	(\$63,942)
\$75,499	\$68,887	\$56,220	(\$26,976)	(\$26,012)	(\$15,928)
\$0	\$0	\$0	\$0	\$0	\$0
\$339,136	\$336,285	\$279,494	\$93,940	\$77,681	\$77,501
	•	•			
2,501	2,213	2,794	2,176	3,297	3,728
	2,213 1,597	2,794 1,755	2,176 1,355	3,297 1,596	3,728 1,500
2,501	,	,	,	,	,

PEND OREILLE PUD, page 2

July 744	August 744	September 720	ANNUAL 8,760	aMW
0.038	0.039	0.078	1.000	
2,115	2,171	4,341	55,658	6.354
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
1-month shape.				

3.0	3.0	6.0	56,568	6.458
3.0	3.0	6.0	30,308	0.438
3.0	3.0	6.0		
hours in the month, onth, I in cell O50.				
2,232	2,232	4,320	56,568	6.458

92,444 161.8	92,183 156.7	90,119 163.8	922,259 N/A	105.281 N/A
74,400 3,668	74,400 3,477	72,000 3,046	624,880 241,720	71.333 27.594
14,376 or additional calculati	14,306	15,073	55,659	6.354
quirements.				
0	0	0	0	0.000
0.000 0	0.000 0	0.000 0	0	0.000
0.000 I,	0.000	0.000		
its will be added.				
14,376	14,306	15,073	55,659	6.354

July	August	September	ANNUAL	aMW
74,400	74,400	72,000	624,880	71.333
42,751	42,751	41,372	503,359	57.461
31,649	31,649	30,628	121,521	13.872
74,400	74,400	72,000	624,880	71.333
-19,615	-18,575	-11,293	-21,078	-2.406
-26.364	-24.966	-15.685		
3,668	3,477	3,046	241,720	27.594
4.930	4.673	4.231		



	2022 7 400 344	2022 8 432 312	2022 9 Annual 400 320	aMW
92,444 161.786 74,400 23,283 0 42,751 0.038 0.538 0.441	92,183 156.652 74,400 22,052 0 42,751 0.039 0.581 0.441	90,119 163.785 72,000 14,339 0 41,372 0.078 0.556 0.444	624,880 262,798 0	105.281 71.333 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July 400 344 3,505,339 1,757,589	August 432 312 3,425,259 1,660,955	September 400 320 2,999,685 1,700,508	ANNUAL 4912 3848 37,328,957 21,681,545	<i>aMW</i> 7,599.543 5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.09432% 0.09432% -2,106 -626	0.09432% 0.09432% -1,935 -631	0.09432% 0.09432% -429 316		

\$188,491	\$188,491	\$188,491	\$2,261,892	
(\$31,120)	(\$31,120)	(\$31,120)	(\$373,440)	
(\$77,573)	(\$69,398)	(\$12,085)	\$13,753	
(\$13,366)	(\$16,932)	\$9,151	\$177,828	
\$0	\$0	\$0	\$0	
\$66,432	\$71,041	\$154,437	\$2,080,033	
3,306	3,231	2,829	35,209	7
1,658	1,567	1,604	20,450	5
1,200	1,296	2,400	31,680	6
1,032	936	1,920	24,888	6

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	145.895	Gross Requirements 7/
NLSL Resources 2/	111.947	New Resources 8/
Existing Resources 3/	17.315	Net Requirements (NR) 9/
Gross Requirements 4/	16.633	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	7.948	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Res
1/ TRL Forecast submitted by custo	omer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast i	if customer	the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	asonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additiona	l calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh	libit A and do	9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	s. Existing Resources	less New Resources.
can be removed in the second year	of a Rate Period.	10/T2 Amounts based on customer's electio
See page 3 for removal of Existing I	Resource calculations.	September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	inary	If T2 Amounts, then amounts go into section
Net Requirement calculation (preli	minary	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	re-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process 0	Outputs spreadsheet	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	han Gross Req,	
Above-RHWM Load, if RHWM is les	ss than Gross Req.	

Monthly Net Requirement Calculations (with Block Amounts)

Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	4,954	21,710	19,670
Monthly T2 Block Amounts (MWh)	0	0	0
, , ,	13/ Exhibit C, Section	n 1.2.1.4 states that mo	nthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
, , , , , , , , , , , , , , , , , , , ,	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

7.0	30.0	26.0
7.0	30.0	26.0
7.0	30.0	26.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within-	-month Block Amounts
rounded to a whole nu	ımber. The diurnal am	ounts go into section :
5,208	21,630	19,344
	7.0 7.0 15/ Shaped within-moand rounded to a whole number of the state	7.0 30.0 7.0 30.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal am

TRL Forecast Energy (MWh)	22,160	44,654	115,317
TRL Forecast Peak (MW)	132.6	149.7	157.1
NLSL Resources (MWh)	0	14,420	78,120
Existing Resources (MWh)	72,838	38,393	3,234
Monthly Gross Requirements (MWh)	-50,678	-8,159	33,963
	16/ TRL Forecast subn	nitted by customer and	approved by BPA (or
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e
			·
New Specified Resources (MWh)	0	0	0
, , ,	0 0.000	0	0.000
New Specified Resources (aMW)			-
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000	0.000	0.000
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (MWh) New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RH

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	14,420	78,120
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	35,369
Updated Resources Serving NLSL (MWh)	0	14,420	78,120
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoui
Change to Existing Resources (MWh)	42,751	26,952	-18,869
Change to Existing Resources (aMW)	57.461	37.381	-25.362
Updated Total Existing Resources (MWh)	72,838	38,393	3,234
Updated Total Existing Resources (aMW)	97.901	53.250	4.347
	19/ If customer has a	single resource split a	mongst NLSL and non-N

Removal of Existing Resources in Second Year of Rate Period (if applicable)
Prepared by BPA, July 28, 2021

1st Year = 0, Second Year = 1

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ar	2021	2021	2021
Prepared by BPA, July 28, 2021		10	11	12
RHWM	24.581	416	400	416
		328	321	328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	115,317
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	78,120
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

Prepared by BPA, July 28, 2021

HLH by Month LLH by Month RHWM T1 System Capability HLH (MWh)	October 416 328 2,920,790	November 400 321 3,537,945	December 416 328 3,223,873
RHWM T1 System Capability LLH (MWh)	1,633,134	2,227,488	2,419,335
BP-22 Final Proposal Rates	,		
Composite Rate (TOCA) (\$\$/%)	\$1,998,417	\$1,998,417	\$1,998,417
Non-Slice Rate (\$\$/%)	(\$329,943)	(\$329,943)	(\$329,943)
Slice Rate (\$\$/%)	, \$0	\$ 0	, \$0
Load Shaping - HLH (\$\$/MWh)	\$29.92	\$31.71	\$38.76
Load Shaping - LLH (\$\$/MWh)	\$28.27	\$29.14	\$32.05
Financial Reserves Policy Surcharge	\$0.00	\$0.00	\$0.00
Financial Reserves Policy Amount	\$0.0	\$-Millions	
Financial Reserves Policy Surcharge	\$0.00		
FY2022 Billing Determinants			
TOCA %	0.24691%	0.24691%	0.24691%
Non-Slice TOCA %	0.24691%	0.24691%	0.24691%
Load Shaping - HLH (MWh)	-4,300	3,264	2,856
Load Shaping - LLH (MWh)	-1,736	4,130	2,554
FY2022 Tier 1 Power Charges without Low Density	Discounts or Irrigation Rate	e Discounts	

Composite Charge	\$493,429	\$493,429	\$493,429
Non-Slice Charge	(\$81,466)	(\$81,466)	(\$81,466)
Load Shaping - HLH	(\$128,648)	\$103,516	\$110,696
Load Shaping - LLH	(\$49,087)	\$120,351	\$81,869
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$234,228	\$635,830	\$604,528
Steps in calculating Load Shaping Billing Determinants	<u>i</u>		
Steps in calculating Load Shaping Billing Determinants System Shaped Load HLH (MWh)	<u>5</u> 7,212	8,736	7,960
	-	8,736 5,500	7,960 5,974
System Shaped Load HLH (MWh)	7,212	,	,

		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
16.633 0.000 16.633		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 16.633 16.633	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
ess T2 ources and ater than		Non-Slice TOCA TOCA		0.24691% 0.24691%	
customer needs 2 remarketing contract. ent Amounts		Notes: 11/ Tier 1 Block Amoun Annual Tier 1 Block Amo 12/ TOCA equals minim divided by the Sum of R	ounts (in aMW) go in um of Net Requireme	to section 1.1 of Exhibi ent or RHWM,	
made by the		Non-Slice TOCA equals		VI III CEII J I S.	
2.5 of Exhibit C. irements.					
Tements.					
January 744	February 672	March 743	April 720	May 744	June 720
January	•			-	
January	•			-	
January 744	0.168 24,478	743	0.010 1,457	0.000 0	720
January 744 0.190 27,684 0	0.168 24,478 0	743 0.159	0.010 1,457 0	0.000 0 0	0.000 0 0

37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

27,528 24,192 23,033 1,440 0

113,973	100,220	134,983	126,862	126,632	121,341
200.4	190.8	183.8	175.8	171.9	159.6
78,120	70,560	106,992	103,680	107,136	103,680
3,073	2,574	2,846	3,802	8,002	6,729
32,780	27,086	25,145	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 25,145 19,380 11,494 10,932

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct Lo	oad, Mill starts in Dec	cember, Crypto ramp	up starting Nov	
January	February	March	April	May	June
78,120	70,560	106,992	103,680	107,136	103,680
42,751	38,614	42,751	41,372	42,751	41,372
35,369	31,946	64,241	62,308	64,385	62,308
78,120	70,560	106,992	103,680	107,136	103,680
rces in Exhibit A to mat	ch NLSL forecast.				
-8,158	-4,344	-4,194	-29,566	-34,850	-31,355
-10.965	-6.464	-5.645	-41.064	-46.841	-43.549
3,073	2,574	2,846	3,802	8,002	6,729
4.130	3.830	3.830	5.281	10.755	9.346
LSL load, then balance	e the single resource am	ounts to match the NLS	I forecast keeping the	total dedicated amou	ints the same.

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022	2022	2022	2022	2022	2022
1	2	3	4	5	6
400	384	432	416	400	416
344	288	311	304	344	304
113,973	100,220	134,983	126,862	126,632	121,341
200.391	190.756	183.772	175.781	171.924	159.600
78,120	70,560	106,992	103,680	107,136	103,680
11,231 0	6,918 0	7,040 0	33,368 0	42,852 0	38,084 0
42,751	38,614	42,751	41,372	42,751	41,372
0.190	0.168	0.159	0.010	0.000	0.000
0.538	0.571	0.581	0.578	0.538	0.578
0.441	0.425	0.440	0.422	0.462	0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January	February	March	April	May	June
400	384	432	416	400	416
344	288	311	304	344	304
2,651,580	2,346,690	2,961,839	2,307,314	3,495,710	3,952,933
2,009,470	1,693,144	1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85 \$0.00	\$28.29 \$0.00	\$28.44 \$0.00	\$25.66 \$0.00	\$16.30 \$0.00	\$10.62 \$0.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
8,253	8,030	6,079	-4,865	-8,631	-9,760
7,766	6,187	5,046	-2,940	-4,178	-3,926

\$493,429	\$493,429	\$493,429	\$493,429	\$493,429	\$493,429
(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)
\$282,995	\$279,356	\$167,596	(\$100,754)	(\$140,517)	(\$167,387)
\$200,762	\$175,043	\$143,515	(\$75,437)	(\$68,094)	(\$41,697)
\$0	\$0	\$0	\$0	\$0	\$0
\$895,720	\$866,362	\$723,074	\$235,772	\$203,352	\$202,879
	·				
6,547	5,794	7,313	5,697	8,631	9,760
	5,794 4,181	7,313 4,595	5,697 3,548	8,631 4,178	9,760 3,926
6,547	,	,	•	,	,

PEND OREILLE PUD, page 2

July 744	August 744	September 720	ANNUAL 8,760	aMW
0.038	0.039	0.078	1.000	
5,537	5,682	11,365	145,704	16.633
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.	,			

7.0	8.0	16.0	145,055	16.559
7.0	8.0	16.0		
7.0	8.0	16.0		
hours in the month, onth, I in cell O50.				
5,208	5,952	11,520	145,055	16.559

125,180 161.8	124,919 156.7	121,799 163.8	1,278,039 N/A	145.895 N/A
107,136 3,668 14,376	107,136 3,477 14,306	103,680 3,046 15,073	980,660 151,682 145,697	111.947 17.315 16.633
or additional calculat quirements.	ions.			
0 0.000	0 0.000	0 0.000	0	0.000
0 0.000 I, its will be added.	0 0.000	0 0.000	0	0.000
14,376	14,306	15,073	145,697	16.633

July	August	September	ANNUAL	aMW
107,136	107,136	103,680	980,660	111.947
42,751	42,751	41,372	503,359	57.461
64,385	64,385	62,308	477,301	54.486
107,136	107,136	103,680	980,660	111.947
-19,615	-18,575	-11,293	-111,116	-12.684
-26.364	-24.966	-15.685		
3,668	3,477	3,046	151,682	17.315
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	2022 9 400 320	9 Annual O	aMW
125,180 161.786 107,136 23,283 0 42,751 0.038 0.538 0.441	124,919 156.652 107,136 22,052 0 42,751 0.039 0.581 0.441	121,799 163.785 103,680 14,339 0 41,372 0.078 0.556 0.444	1,278,039 980,660 262,798 0 503,359 1.000	145.895 111.947 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.24691% 0.24691% -5,855 -1,932	0.24691% 0.24691% -5,001 -1,605	0.24691% 0.24691% -1,007 921		

\$493,429	\$493,429	\$493,429	\$5,921,148	
(\$81,466)	(\$81,466)	(\$81,466)	(\$977,592)	
(\$215,641)	(\$179,397)	(\$28,334)	(\$16,519)	
(\$41,260)	(\$43,096)	\$26,671	\$429,540	
\$0	\$0	\$0	\$0	
\$155,062	\$189,470	\$410,300	\$5,356,577	
8,655	8,457	7,407	92,169	19
4,340	4,101	4,199	53,534	14
2,800	3,456	6,400	81,232	17
2,408	2,496	5,120	63,823	17

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Ca	lculation
(in annual aMW)		(in annual aMW)	
TRL Forecast 1/	139.851	Gross Requirements 7/	26.544
NLSL Resources 2/	105.904	New Resources 8/	1.963
Existing Resources 3/	7.403	Net Requirements (NR) 9/	24.581
Gross Requirements 4/	26.544		
		Tier 2 Block Amounts 10/	0.000
RHWM 5/	24.581		
		Notes:	
Above-RHWM Load 6/	1.963	7/ Gross Requirements from Step 1.	
		8/ New Resources equal Above-RHWM I	Load less T2
Notes:		Amounts. If customer has New Specified	d Resources and
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amour	nt greater than
approved by BPA (or BPA forecast i	f customer	the customer's Above-RHWM Load, then	n the customer needs
submitted forecast deemed not rea	asonable.)	to determine the order of resource remo	oval/T2 remarketing
2/ If NLSL see page 3 for additional	l calculations.	per section 10 of the body of the Slice/B	lock Contract.
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requ	irement Amounts
not include resources serving NLSLs	s. Existing Resources	less New Resources.	
can be removed in the second year	of a Rate Period.	10/ T2 Amounts based on customer's ele	ection made by the
See page 3 for removal of Existing F	Resource calculations.	September 30, 2011 Notice Deadline.	
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into sec	ction 2.5 of Exhibit C.
Net Requirement calculation (prelir	minary	T2 Amounts plus T1 Amounts equal Net	Requirements.
since New Resources to serve Abov	re-RHWM		
Load have not yet been added.)			
5/ RHWM is from RHWM Process C	Outputs spreadsheet		
published on September 28, 2012,	with updates		
for Provisional HWM if necessary.			
6/ Headroom, if RHWM is greater t	han Gross Req,		
Above-RHWM Load, if RHWM is les	ss than Gross Reg.		

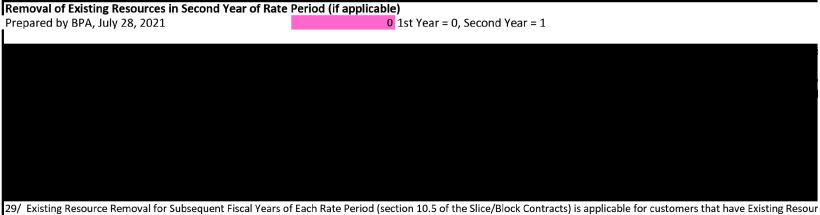
Monthly Net Requirement Calculations (with Block Amounts)

Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	January 744	February 672
Step 4: Monthly Tier 1 Block Amount Calculati	ons				
Monthly Block Shaping Factors	0.034	0.149	0.135	0.190	0.168
Monthly T1 Block Amounts (MWh)	7,321	32,084	29,069	40,913	36,175
Monthly T2 Block Amounts (MWh)	0	0	0	0	0
		n 1.2.1.4 states that mo n Exhibit C, Section 1.2.		unts in MWh are equal	to the Monthly Shapi
Diurnal Shaping Factors					
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
	14/ Diurnal Shaping I	Factors per Exhibit C, Se	ection 1.2.2.4 if custom	er elected Tier 1 Block	within-month shaped
Total - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
HLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
LLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
LLH - 11 Block Amounts (WW/III)	15/ Shaped within-m and rounded to a who	nonth Block Amounts ar ole number. Flat within	re megawatt per hour -month Block Amounts	amounts equal to the i are megawatt per hou	monthly MWh amoun ur amounts equal to th
• • • •	15/ Shaped within-m and rounded to a who	onth Block Amounts ar	re megawatt per hour -month Block Amounts	amounts equal to the i are megawatt per hou	monthly MWh amour ur amounts equal to t
Tier 1 and Tier 2 Block Amounts (MWh)	15/ Shaped within-m and rounded to a who rounded to a whole n 7,440	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724	re megawatt per hour -month Block Amounts nounts go into section :	amounts equal to the I are megawatt per hou L.3 of Exhibit C. Due to	monthly MWh amoun ur amounts equal to th o rounding the total m
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns	15/ Shaped within-mand rounded to a who rounded to a whole note of the following specified Resources Amount 80,313	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350	amounts equal to the is are megawatt per hou. I.3 of Exhibit C. Due to 40,920	monthly MWh amoun ur amounts equal to the prounding the total m 36,288
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW)	15/ Shaped within-mand rounded to a whole nounded t	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (s) 86,590 149.7	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350 157.1	amounts equal to the interpretation and are megawatt per hour and the following series and the following series are megawatt per hour and the following series are meg	monthly MWh amoun ur amounts equal to the prounding the total muse 36,288
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (ss) 86,590 149.7 56,356	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350 157.1 58,153	amounts equal to the is are megawatt per hou. I.3 of Exhibit C. Due to 40,920 121,605 200.4 85,752	monthly MWh amoun ur amounts equal to the prounding the total muse 36,288 107,113 190.8 77,453
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	nonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (s) 86,590 149.7 56,356 2,905	re megawatt per hour -month Block Amounts nounts go into section 2 29,016 95,350 157.1 58,153 10,042	amounts equal to the is are megawatt per hou. I.3 of Exhibit C. Due to 40,920 121,605 200.4 85,752 3,073	monthly MWh amoun ar amounts equal to the crounding the total must assume the second s
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 (ss) 86,590 149.7 56,356	95,350 157.1 58,153 10,042 27,155 I approved by BPA (or I	amounts equal to the interest and are megawatt per hour interest and a second and a	nonthly MWh amoun ar amounts equal to the crounding the total must a 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approve
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 ss) 86,590 149.7 56,356 2,905 27,329 mitted by customer and	95,350 157.1 58,153 10,042 27,155 I approved by BPA (or I	amounts equal to the interest and are megawatt per hour interest and a second and a	nonthly MWh amount or amounts equal to the orounding the total management 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approv
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	15/ Shaped within-mand rounded to a whole nounded t	sonth Block Amounts ar ole number. Flat within number. The diurnal am 31,724 ss) 86,590 149.7 56,356 2,905 27,329 mitted by customer and om Exhibit A. Monthly of	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or I	amounts equal to the interest and the state of Exhibit C. Due to 40,920 121,605 200.4 85,752 3,073 32,780 BPA forecast if customicals TRL less NLSLs and	nonthly MWh amounts ar amounts equal to the prounding the total means and a second sec
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh)	15/ Shaped within-mand rounded to a whole nounded t	anonth Block Amounts are sole number. Flat within number. The diurnal am 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 I approved by BPA (or I	amounts equal to the is are megawatt per hould be are to a solution of the are megawatt per hould be are a solution of the are megawatt per hould be are are are are are are are are are ar	nonthly MWh amoun ar amounts equal to the crounding the total must a 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approved Exisiting Resources.

					st dedicate New Specific oad. If New Specified Re
Net Requirement Forecast (MWh)	6,015	25,914	25,695	31,320	25,767
	18/ Net Requirements	equals TRL less NLS	Ls, Existing Resources, N	ew Resources (Specifi	ed and Unspecified), and

Prepared by BPA, July 28, 2021					
	October	November	December	January	February
NLSL Forecast (MWh)	58,153	56,356	58,153	85,752	77,453
Resources Serving an NLSL (MWh)	42,751	41,372	42,751	42,751	38,614
Change to NLSL Resources (MWh)	15,402	14,984	15,402	43,001	38,839
Jpdated Resources Serving NLSL (MWh)	58,153	56,356	58,153	85,752	77,453
	40/0:: 1				
	18/ Original resource	e amounts from Exhibit	A. Update NLSL resou	rces in Exhibit A to ma	tch NLSL forecast.
Change to Existing Resources (MWh)	-15,402	e amounts from Exhibit -8,536	-12,061	ces in Exhibit A to ma -8,158	tch NLSL forecast4,344
, ,	,		•		
Change to Existing Resources (aMW)	-15,402	-8,536	-12,061	-8,158	-4,344
Change to Existing Resources (aMW) Jpdated Total Existing Resources (MWh)	-15,402 -20.702	-8,536 -11.839	-12,061 -16.212	-8,158 -10.965	-4,344 -6.464
Change to Existing Resources (MWh) Change to Existing Resources (aMW) Updated Total Existing Resources (MWh) Updated Total Existing Resources (aMW)	-15,402 -20.702 14,685 19.737	-8,536 -11.839 2,905 4.029	-12,061 -16.212 10,042 13.497	-8,158 -10.965 3,073 4.130	-4,344 -6.464 2, 574 3.830
Change to Existing Resources (aMW) Updated Total Existing Resources (MWh)	-15,402 -20.702 14,685 19.737	-8,536 -11.839 2,905	-12,061 -16.212 10,042 13.497	-8,158 -10.965 3,073 4.130	-4,344 -6.464 2, 574 3.830
Change to Existing Resources (aMW) Updated Total Existing Resources (MWh)	-15,402 -20.702 14,685 19.737 19/ If customer has a	-8,536 -11.839 2,905 4.029 a single resource split a	-12,061 -16.212 10,042 13.497	-8,158 -10.965 3,073 4.130	-4,344 -6.464 2, 574 3.830



that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's forecast of Customer's Net Requirement for each

Customer Specific Data for Fiscal Year 2021 2021 2022 2022

Prepared by BPA, July 28, 2021 RHWM BES Number	24.581 10306	10 416 328	11 400 321	12 416 328	1 400 344	2 384 288
T2 Block Amounts TRL Forecast - Energy (MWh) TRL Forecast - Peak (MW) NLSL Forecast Existing New NLSL Block Shaping Factors HLH Shaping Factors LLH Shaping Factors	0	80,313 132.585 58,153 30,087 0 42,751 0.034 0.559 0.419	86,590 149.663 56,356 11,441 0 41,372 0.149 0.555 0.445	95,350 157.084 58,153 22,103 0 42,751 0.135 0.559 0.462	121,605 200.391 85,752 11,231 0 42,751 0.190 0.538 0.441	107,113 190.756 77,453 6,918 0 38,614 0.168 0.571 0.425
Existing Resource Removal Shape New Resource Removal Shape		0.119 0.000	0.039 0.000	0.084 0.000	0.037 0.000	0.020 0.000

Customer Charges and Load Shaping Charges Prepared by BPA, July 28, 2021

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328	January 400 344	February 384 288
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335	2,651,580 2,009,470	2,346,690 1,693,144
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Surcharge Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.29 \$25.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.79 \$28.29 \$0.00
<u>FY2022 Billing Determinants</u> TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%

•					
Non-Slice TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%
Load Shaping - HLH (MWh)	-6,498	4,690	4,460	12,324	12,173
Load Shaping - LLH (MWh)	-2,679	5,996	3,964	11,587	9,374
FY2022 Tier 1 Power Charges without Low Density Disc	ounts or Irrigation Ro	ate Discounts			
Composite Charge	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222
Non-Slice Charge	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)
Load Shaping - HLH	(\$194,419)	\$148,721	\$172,873	\$422,603	\$423,496
Load Shaping - LLH	(\$75,744)	\$174,720	\$127,041	\$299,535	\$265,183
Financial Reserves Policy Surcharge	\$0	\$0	\$0	\$0	\$0
Total	\$338,663	\$932,267	\$908,740	\$1,330,964	\$1 , 297,505
Steps in calculating Load Shaping Billing Determinants					
System Shaped Load HLH (MWh)	10,658	12,910	11,764	9,676	8,563
System Shaped Load LLH (MWh)	5,959	8,128	8,828	7,333	6,178
Actual Tier 1 Load HLH (MWh)	4,160	17,600	16,224	22,000	20,736
Actual Tier 1 Load LLH (MWh)	3,280	14,124	12,792	18,920	15,552

Step 3: Critical Slice & Block Amounts (with TOCAs)

(in annual aMW)

 Tier 2 Block Amounts
 0.000

 Tier 1 Block Amounts 11/
 24.581

 Net Requirements
 24.581

TOCAs 12/

Sum of RHWM 6736.361

Non-Slice TOCA 0.36490% TOCA 0.36490%

Notes:

11/ Tier 1 Block Amounts equal Net Requirement less Tier 2 Amounts. Annual Tier 1 Block Amounts (in aMW) go into section 1.1 of Exhibit C. 12/ TOCA equals minimum of Net Requirement or RHWM, divided by the Sum of RHWM. Sum of RHWM in cell J18. Non-Slice TOCA equals TOCA.

PEND OREILLE PUD, page 2

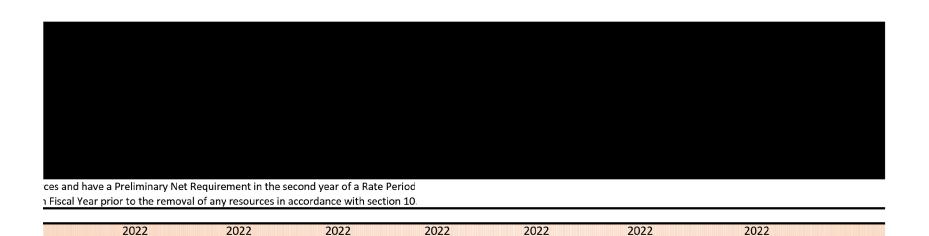
March 743	April 720	May 744	June 720	July 744	August 744	September 720	ANNUAL 8,7 60
0.159	0.010	0.000	0.000	0.038	0.039	0.078	1.000
34,237	2,153	0	0	8,183	8,398	16,796	215,330
0	0	0	0	0	0	0	0
ors * Annual Tier	1 Block Amounts in aN	/IW (see Step 3) * Hou	urs in Fiscal Year				
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	ent. Not applicable to cu	ustomers who elected		in-month shape.			
46.0	3.0	0.0	0.0	11.0	11.0	23.0	214,654
4C O	3.0	0.0	0.0	11.0	11.0	23.0	·
46.0	3.0	0.0	7.7				
46.0	3.0	0.0	0.0	11.0	11.0	23.0	
46.0 llated per 1.2.14	3.0 of Exhibit C multiplied	0.0 by the diurnal shaping	0.0 g factor, divided by th	11.0 e hours in the month,	11.0		
46.0 llated per 1.2.14	3.0	0.0 by the diurnal shaping	0.0 g factor, divided by th	11.0 e hours in the month,	11.0		
46.0 Ilated per 1.2.14 thly MWh amour	3.0 of Exhibit C multiplied	0.0 by the diurnal shaping 4 of Exhibit C divided	0.0 g factor, divided by th by the hours in the m	11.0 e hours in the month, onth,	11.0		
46.0 llated per 1.2.14 thly MWh amour t-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ued in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.		23.0	
46.0 Ilated per 1.2.14 thly MWh amour	3.0 of Exhibit C multiplied lates calculated per 1.2.1	0.0 by the diurnal shaping 4 of Exhibit C divided	0.0 g factor, divided by th by the hours in the m	11.0 e hours in the month, onth,	11.0 8,184		214,654
46.0 lated per 1.2.14 thly MWh amour t-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ued in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.		23.0	214,654
46.0 lated per 1.2.14 thly MWh amour t-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ued in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.		23.0	214,654
46.0 lated per 1.2.14 :hly MWh amour t-hours establish	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ued in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by th by the hours in the mawatt-hours calculate	11.0 e hours in the month, conth, ed in cell O50.		23.0	214,654
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, conth, ed in cell O50. 8,184	8,184	23.0 16,560	
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, nonth, ed in cell 050. 8,184	8,184 103,535	23.0 16,560 101,104	1,225,09
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0 100,646 159.6	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8	8,184 103,535 156.7	16,560 101,104 163.8	1,225,09 N/A
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0 100,646 159.6 82,985	11.0 e hours in the month, north, ed in cell 050. 8,184 103,796 161.8 85,752	8,184 103,535 156.7 85,752	16,560 101,104 163.8 82,985	1,225,09 N/A 927,715
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0 100,646 159.6 82,985 6,729	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668	8,184 103,535 156.7 85,752 3,477	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494	0.0 g factor, divided by th by the hours in the m awatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376	8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985	1,225,09 N/A 927,715 64,848
46.0 llated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 B for additional calcula	8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 B for additional calcula	8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 B for additional calcula	8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 lated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener o add New Resou	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into ources if customer has A	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculated 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, nonth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula dequirements.	8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,09 N/A 927,715 64,848 232,531
46.0 ilated per 1.2.14 thly MWh amour it-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener o add New Resou	3.0 of Exhibit C multiplied Ints calculated per 1.2.1 ned in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into ources if customer has A	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculate o 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, conth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 8 for additional calcula dequirements.	8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,09 N/A 927,715 64,848 232,531

ed Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Load, esources were not added to serve Above-RHWM Load, then Unspecified Resource Amounts will be added.

23,686	17,966	10,034	9,518	12,916	12,846	13,659	215,335
d plus T2 Amounts. Net I	Requirements goes in	to section 1.2 of Exhib	oit A.				

PEND OREILLE PUD, page 3

March	April	May	June	July	August	September	ANNUAL
85,636	82,985	85,752	82,985	85,752	85,752	82,985	927,715
42,751	41,372	42,751	41,372	42,751	42,751	41,372	503,359
42,885	41,613	43,001	41,613	43,001	43,001	41,613	424,356
85,636	82,985	85,752	82,985	85,752	85,752	82,985	927,715
-4,194	-29,566	-34,850	-31,355	-19,615	-18,575	-11,293	-197,950
-5.645	-41.064	-46.841	-43.549	-26.364	-24.966	-15.685	
2,846	3,802	8,002	6,729	3,668	3,477	3,046	64,848
3.830	5.281	10.755	9.346	4.930	4.673	4.231	
to match the NLS	SL forecast keeping th	e total dedicated amo	unts the same.				



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3	4	5	6	7	8	9 Ai	nnual
432	416	400	416	400	432	400	
311	304	344	304	344	312	320	
113,627	106,167	105,248	100,646	103,796	103,535	101,104	1,225,094 927,715 262,798 0 503,359 1.000
183.772	175.781	171.924	159.600	161.786	156.652	163.785	
85,636	82,985	85,752	82,985	85,752	85,752	82,985	
7,040	33,368	42,852	38,084	23,283	22,052	14,339	
0	0	0	0	0	0	0	
42,751	41,372	42,751	41,372	42,751	42,751	41,372	
0.159	0.010	0.000	0.000	0.038	0.039	0.078	
0.581	0.578	0.538	0.578	0.538	0.581	0.556	
0.440	0.422	0.462	0.422	0.441	0.441	0.444	
0.019	0.133	0.173	0.154	0.089	0.084	0.051	1.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
					PE	END OREILLE PUD, page	e 4
March	April	May	June	July	August	September	ANNUAL
432	416	400	416	400	432	400	4912
311	304	344	304	344	312	320	3848
2,961,839	2,307,314	3,495,710	3,952,933	3,505,339	3,425,259	2,999,685	37,328,957
1,860,906	1,436,906	1,691,935	1,590,174	1,757,589	1,660,955	1,700,508	21,681,545
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$27.57	\$20.71	\$16.28	\$17.15	\$36.83	\$35.87	\$28.15	
\$28.44	\$25.66	\$16.30	\$10.62	\$21.36	\$26.85	\$28.95	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	
9,064	-7,171	-12,756	-14,424	-8,391	-7,747	-1,746	
7,516	-4,331	-6,174	-5,803	-2,629	-2,629	1,155	
\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$8,750,664
(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$1,444,752)
\$249,901	(\$148,519)	(\$207,665)	(\$247,376)	(\$309,040)	(\$277,877)	(\$49,146)	(\$16,448)
\$213,742	(\$111,140)	(\$100,634)	(\$61,623)	(\$56,165)	(\$70,584)	\$33,433	\$637,764
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,072,469	\$349,167	\$300,527	\$299,827	\$243,621	\$260,365	\$593,113	\$7,927,228
10,808	8,419	12,756	14,424	12,791	12,499	10,946	136,213
6,790	5,243	6,174	5,803	6,413	6,061	6,205	79,116
19,872	1,248	0	0	4,400	4,752	9,200	120,192
14,306	912	0	0	3,784	3,432	7,360	94,462

aMW

24.581 0.000

24.504

24.504

139.851 N/A 105.904 7.403 26.544

1.963

0.000

24.581

aMW 105.904

57.461 48.442 105.904

-22.597

7.403

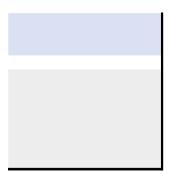
aMW

139.851

105.904 30.000 0.000 57.461

aMW

7,599.543 6736 5,634.497



From: Patton, Kathryn B (BPA) - PSS-SEATTLE

Sent: Wed Sep 01 15:20:10 2021

To: April Owen

Cc: Normandeau, Mike (BPA) - PSE-RONAN; Babaidhan, Sami A (BPA) - PSSE-MEAD-GOB

Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Importance: Normal

Attachments: FY2022_NetRequirement_PEND_OREILLE_Draft at different NLSL loads_210901.xlsx

Hello,

See attached for scenario 4.

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

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From: April Owen <aowen@popud.org> Sent: Wednesday, September 1, 2021 3:02 PM To: Patton,Kathryn B (BPA) - PSS-SEATTLE <kbpatton@bpa.gov> Cc: Normandeau,Mike (BPA) - PSE-RONAN <mrnormandeau@bpa.gov>; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB <sababaidhan@bpa.gov> Subject: [EXTERNAL] FW: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx</sababaidhan@bpa.gov></mrnormandeau@bpa.gov></kbpatton@bpa.gov></aowen@popud.org>
Kate,
I wanted to double-check my numbers on one last scenario, which is just like scenario 3 except that the mill starts in November:
<u>Oct</u>
<u>Nov</u>
<u>Dec</u>
<u>Jan</u>
<u>Feb</u>
<u>Mar</u>
2

May
June
July
Aug

Mill Operations (NLSL)

<u>Sept</u>

<u>Apr</u>

8585Cryptomining (New NLSL)020

Total additional load

We will meet either today or tomorrow to make a final decision and get back to you. Thanks,

April.

From: Patton,Kathryn B (BPA) - PSS-SEATTLE kbpatton@bpa.gov
Sent: Monday, August 30, 2021 11:11 AM
To: April Owen aowen@popud.org
Cc: Normandeau,Mike (BPA) - PSE-RONAN mrnormandeau@bpa.gov
; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB sababaidhan@bpa.gov
Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Hello April,

The attached has Scenario 3.

Annual Net Requirement: 16.633

Monthly Block Amounts:

October

November

December

January

February

6

March

April

May

June

July

August

September

5,208

21,630

19,344

27,528

24,192

23,033

1,440

0

0

5,208

5,952

11,520

Monthly Power Costs:

\$234,228

\$635,830

\$604,528

\$895,720

\$866,362

\$723,074

\$235,772

\$203,352

\$202,879

\$155,062

\$189,470

\$410,300

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

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From: April Owen aowen@popud.org
Sent: Monday, August 30, 2021 10:45 AM

To: Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov>

Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov >; Babaidhan, Sami A (BPA) - PSSE-

MEAD-GOB < sababaidhan@bpa.gov >

Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Good morning Kate,

I was wondering where to go next when I got the notification from Andres, so thank you for running the numbers! That was very helpful, as I was not correctly incorporating in my estimates how the months with zero

NLSL reduced the overall Net Requirements annual average. Could you run one more scenario for me?

<u>Oct</u>	
Nov	
<u>Dec</u>	
<u>Jan</u>	
<u>Feb</u>	
<u>Mar</u>	
<u>Apr</u>	
May	
<u>June</u>	
July	
Aug	
Sept	
Mill Operations (NLSL)	
0	
0	

Total additional load

144
144
144
We are meeting with the customer this afternoon, so I am hoping to be able to get back to everyone on our final number tomorrow. Thanks for all the help!
April.
From: Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov > Sent: Monday, August 30, 2021 10:16 AM
To: April Owen aowen@popud.org ; Cicarelli,Andres A (BPA) - KSL-BELL-1 aacicarelli@bpa.gov > Cc: Normandeau,Mike (BPA) - PSE-RONAN mrnormandeau@bpa.gov >; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB sababaidhan@bpa.gov >
Subject: RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx
Hello April.

Just to let you know Andres retired on Friday. Mike is working with our forecasting manager to find out who will be covering his accounts. In the meantime I was able to mock up new Net Requirement calculations based on your two scenarios. You can reference attached to see the specifics but here is how it breaks down. Scenario 1: Annual aMW Net Requirement: 7.896 aMWs Monthly Block amounts: October November December January February March April May

14

June

July

August

September

2,232

10,094

9,672

13,392

11,424

11,145

720

0

0

2,976

2,976

Monthly Total Power Costs:

15

\$104,174

\$296,516

\$304,490

\$435,058

\$409,343

\$349,143

\$112,752

\$96,532

\$96,307

\$88,557

\$94,772

\$182,554

Scenario 2:

Annual aMW Net Requirement: 6.354 aMWs

Monthly Block amounts:

16

October

November

December

January

February

March

April

May

June

July

August

September

2,232

8,652

7,440

10,416

9,408

8,916

720

0

0

2,232

2,232

4,320

Monthly Total Power Costs:

\$96,556

\$254,788

\$232,742

\$339,136

\$336,285

\$279,494

\$93,940

\$77,681

18

\$77,501

\$66,432

\$71,041

\$154,437

Please let me know if you have any questions.

Kathryn Patton

Public Utility Specialist | Power Account Services

Bonneville Power Administration

bpa.gov | P 206-403-8034 |

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From: April Owen <aowen@popud.org>

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Sent: Friday, August 27, 2021 4:05 PM To: Cicarelli, Andres A (BPA) - KSL-BELL-1 <aacicarelli@bpa.gov> Cc: Normandeau, Mike (BPA) - PSE-RONAN knormandeau@bpa.gov; Patton, Kathryn B (BPA) - PSS-SEATTLE < kbpatton@bpa.gov> Subject: [EXTERNAL] RE: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx Hi Andres, Mike and Kate and I discussed the Net Requirements process, as BPA transmission will need to perform studies at the mill site that will delay their start date. We discussed running through some scenarios to see what difference it made (if any) on the Net Requirements calculation. Not sure if you are the right person for this, but started with you! Here's what I would like to test: Oct Nov Dec Jan Feb Mar

<u>Apr</u>

<u>May</u>

<u>June</u>

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

0

0

0

85

85

85

85

85

85

85

21

Cryptomining (New NLSL)

Total additional load

<u>Oct</u>

<u>Nov</u>

<u>Dec</u>

<u>Jan</u>

<u>Feb</u>

<u>Mar</u>

<u>Apr</u>

<u>May</u>

<u>June</u>

<u>July</u>

<u>Aug</u>

<u>Sept</u>

Mill Operations (NLSL)

0

0

0

0

80

80

24

Total additional load

Let me know if I should run this through someone else. Again, I am looking to see if it changes what our annual Net Requirements will be. Otherwise, we will stick with what you have outlined below.
Thanks!

April Owen

April.

Director, Audit, Finance & Power Supply

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington | Newport, WA 99156

509.447.9321 | aowen@popud.org | www.popud.org

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From: Cicarelli, Andres A (BPA) - KSL-BELL-1 < aacicarelli@bpa.gov > **Sent:** Friday, August 20, 2021 12:09 PM To: April Owen <aowen@popud.org> Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov> Subject: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe. Hi April, Attached is the revised FY2022 forecast for Pend Oreille based on the PUD's comments. Any thoughts? Talk to you later, **Andres**

26981425 BPA-2022-00699-F 0717

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Pend Oreille County Public Utility District #1

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FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cald	culation	Step 2: Annual Net Requirement Calcula		
(in annual aMW)		(in annual aMW)		
TRL Forecast 1/	116.349	Gross Requirements 7/		
NLSL Resources 2/	82.401	New Resources 8/		
Existing Resources 3/	26.052	Net Requirements (NR) 9/		
Gross Requirements 4/	7.896			
		Tier 2 Block Amounts 10/		
RHWM 5/	24.581			
		Notes:		
Headroom 6/	16.685	7/ Gross Requirements from Step 1.		
		8/ New Resources equal Above-RHWM Load		
Notes:		Amounts. If customer has New Specified Re		
1/ TRL Forecast submitted by custor	mer and	T2 Block Amounts that sum to an amount gro		
approved by BPA (or BPA forecast if		the customer's Above-RHWM Load, then the		
submitted forecast deemed not rea	•	to determine the order of resource removal/		
2/ If NLSL see page 3 for additional		per section 10 of the body of the Slice/Block		
3/ Existing Resources are from Exhi		9/ Net Requirements equals Gross Requiren		
not include resources serving NLSLs	-	less New Resources.		
can be removed in the second year		10/ T2 Amounts based on customer's electio		
See page 3 for removal of Existing R		September 30, 2011 Notice Deadline.		
4/ Gross Requirements is a prelimin	•	If T2 Amounts, then amounts go into section		
Net Requirement calculation (prelin	•	T2 Amounts plus T1 Amounts equal Net Requ		
since New Resources to serve Abov	e-RHWM			
Load have not yet been added.)				
5/ RHWM is from RHWM Process O	• •			
published on September 28, 2012, v	with updates			
for Provisional HWM if necessary.				
6/ Headroom, if RHWM is greater the				
Above-RHWM Load, if RHWM is les	s than Gross Req.			

Monthly Net Requirement Calculations (with Block Amounts)

Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	
Step 4: Monthly Tier 1 Block Amount Calculations				
Monthly Block Shaping Factors	0.034	0.149	0.135	
Monthly T1 Block Amounts (MWh)	2,352	10,306	9,337	
Monthly T2 Block Amounts (MWh)	0	0	0	
	13/ Exhibit C, Section 1.2.1.4 states that monthly Tier 1 Block amou			
	Shaping Factors are in	n Exhibit C, Section 1.2.	13	
Diurnal Shaping Factors				
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	
	14/ Diurnal Shaping Factors per Exhibit C, Section 1.2.2.4 if custom			

Total - T1 Block Amounts (MW/hr)	3.0	14.0	13.0		
HLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0		
LLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0		
	15/ Shaped within-month Block Amounts arre megawatt per hour				
	and rounded to a whole number. Flat within-month Block Amounts				
	rounded to a whole number. The diurnal amounts go into section				
Tier 1 and Tier 2 Block Amounts (MWh)	2,232	10,094	9,672		

TRL Forecast Energy (MWh)	22,160	30,234	37,197		
TRL Forecast Peak (MW)	132.6	149.7	157.1		
NLSL Resources (MWh)	0	0	0		
Existing Resources (MWh)	72,838	52,813	68,195		
Monthly Gross Requirements (MWh)	-50,678	-22,579	-30,998		
	16/ TRL Forecast submitted by customer and approved by BPA (or				
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e		
New Specified Resources (MWh)	0	0	0		
New Specified Resources (MWh) New Specified Resources (aMW)	0.000	0.000	0 0.000		
, , ,		-	-		
New Specified Resources (aMW)	0.000	0.000	0.000		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000	0.000 0	0.000 0 0.000		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000	0.000 0 0.000 o serve Above-RHWM		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM		

October	November	December
0	0	0
42,751	41,372	42,751
-42,751	-41,372	-42,751
0	0	0
18/ Original resource	amounts from Exhibit	A. Update NLSL reso
42,751	41,372	46,092
57.461	57.381	61.952
72,838	52,813	68,195
97.901	73.250	91.660
	0 42,751 -42,751 0 18/ Original resource 42,751 57.461	0 0 42,751 41,372 -42,751 -41,372 0 0 18/ Original resource amounts from Exhibit 42,751 41,372 57.461 57.381

Removal of Existing Resources in Second Year of Rate Period (if applicable)
Prepared by BPA, July 28, 2021

0 1st Year = 0, Second Year = 1

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Yea	ar	2021	20)21 2021
Prepared by BPA, July 28, 2021		10		11 12
RHWM	24.581	416	4	100 416
		328	3	328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	30,234	37,197
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	0	0
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

2,920,790	2 527 045	
1,633,134	3,537,945 2,227,488	3,223,873 2,419,335
\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
0.11721% 0.11721% -2,175 -930	0.11721% 0.11721% 1,453 1,883	0.11721% 0.11721% 1,629 1,428
	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0 \$0.11721% 0.11721% -2,175 -930	\$1,998,417

Composite Charge	\$234,234	\$234,234	\$234,234
Non-Slice Charge	(\$38,673)	(\$38,673)	(\$38,673)
Load Shaping - HLH	(\$65,090)	\$46,080	\$63,152
Load Shaping - LLH	(\$26,297)	\$54,875	\$45,777
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$104,174	\$296,516	\$304,490
Steps in calculating Load Shaping Billing Determ	<u>ninants</u>		
System Shaped Load HLH (MWh)	3,423	4,147	3,779
System Shaped Load LLH (MWh)	1,914	2,611	2,836
Actual Tier 1 Load HLH (MWh)	1,248	5,600	5,408
Actual Tier 1 Load LLH (MWh)	984	4,494	4,264

tion		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)				
7.896 0.000 7.896		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 7.896 7.896		
0.000		TOCAs 12/				
		Sum of RHWM		6736.361		
less T2 sources and eater than		Non-Slice TOCA 0.11721% TOCA 0.11721%				
e customer needs T2 remarketing Contract. nent Amounts		Notes: 11/ Tier 1 Block Amount Annual Tier 1 Block Amount 12/ TOCA equals minim	ounts (in aMW) go in um of Net Requireme	to section 1.1 of Exhibi ent or RHWM,		
n made by the		divided by the Sum of RHWM. Sum of RHWM in cell J18. Non-Slice TOCA equals TOCA.				
2.5 of Exhibit C. uirements.						
January 744	February 672	March 743	April 720	May 744	June 720	
			0.40	0.000	0.000	
0.190	0.168	0.159	0.010	0.000	0.000	
0.190 13,141	0.168 11,620	0.159 10,997	0.010 692	0.000	0.000	

N/A

N/A

N/A

N/A

N/A

N/A

18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

13,392 11,424 11,145 720 0

99,093	86,780	91,146	102,382	101,336	96,861
200.4	190.8	183.8	175.8	171.9	159.6
63,240	57,120	63,155	79,200	81,840	79,200
3,073	2,574	0	3,802	8,002	6,729
32,780	27,086	27,991	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 27,991 19,380 11,494 10,932

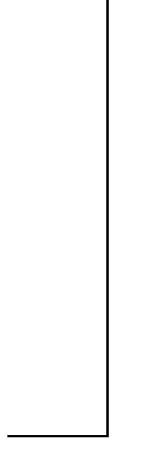
ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct-Dec L	oad, Jan-Sep Mill on	full, Crypto starts in	April with full ramp	
January	February	March	April	May	June
63,240	57,120	63,155	79,200	81,840	79,200
42,751	38,614	42,751	41,372	42,751	41,372
20,489	18,506	20,404	37,828	39,089	37,828
63,240	57,120	63,155	79,200	81,840	79,200
rces in Exhibit A to mat	ch NLSL forecast.				
-8,158	-4,344	-20,404	-29,566	-34,850	-31,355
-10.965	-6.464	-27.462	-41.064	-46.841	-43.549
3,073	2,574	0	3,802	8,002	6,729
4.130	3.830	0.000	5.281	10.755	9.346
JISI load then balance	the single resource amo	ounts to match the NIS	I forecast keening the	total dedicated amou	ints the same

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022		2022	2022	2022	2022
1 400	384	3 432	4 416	5 400	6 416
344	288	311	304	344	304
99,093 200.391 63,240 11,231 0 42,751 0.190 0.538 0.441	86,780 190.756 57,120 6,918 0 38,614 0.168 0.571	91,146 183.772 63,155 7,040 0 42,751 0.159 0.581 0.440	102,382 175.781 79,200 33,368 0 41,372 0.010 0.578 0.422	101,336 171,924 81,840 42,852 0 42,751 0.000 0.538 0.462	96,861 159.600 79,200 38,084 0 41,372 0.000 0.578 0.422
0.037 0.000	0.020 0.000	0.019 0.000	0.133 0.000	0.173 0.000	0.154 0.000
January 400	February 384	March 432	April 416	May 400	June 416
344	288	311	304	344	304
2,651,580 2,009,470	2,346,690 1,693,144	2,961,839 1,860,906	2,307,314 1,436,906	3,495,710 1,691,935	3,952,933 1,590,174
\$1,998,417 (\$329,943) \$0 \$34.29 \$25.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.79 \$28.29 \$0.00	\$1,998,417 (\$329,943) \$0 \$27.57 \$28.44 \$0.00	\$1,998,417 (\$329,943) \$0 \$20.71 \$25.66 \$0.00	\$1,998,417 (\$329,943) \$0 \$16.28 \$16.30 \$0.00	\$1,998,417 (\$329,943) \$0 \$17.15 \$10.62 \$0.00
0.11721% 0.11721% 4,092 3,837	0.11721% 0.11721% 3,777 2,911	0.11721% 0.11721% 3,008 2,484	0.11721% 0.11721% -2,288 -1,380	0.11721% 0.11721% -4,097 -1,983	0.11721% 0.11721% -4,633 -1,864

\$234,234	\$234,234	\$234,234	\$234,234	\$234,234	\$234,234
(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)
\$140,318	\$131,417	\$82,942	(\$47,393)	(\$66,704)	(\$79,460)
\$99,179	\$82,365	\$70,640	(\$35,416)	(\$32,325)	(\$19,794)
\$0	\$0	\$0	\$0	\$0	\$0
\$435,058	\$409,343	\$349,143	\$112,752	\$96,532	\$96,307
3,108	2,751	3,472	2,704	4,097	4,633
2,355	1,985	2,181	1,684	1,983	1,864
7,200	6,528	6,480	416	0	0
6,192	4,896	4,665	304	0	0



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
				1
0.038	0.039	0.078	1.000	
2,628	2,697	5,395	69,166	7.896
Ô	0	0	Ó	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				

4.0	4.0	7.0	69,671	7.953
4.0	4.0	7.0		
4.0	4.0	7.0		
hours in the month, inth, I in cell O50.				
2,976	2,976	5,040	69,671	7.953

118,484 161.8	118,223 156.7	115,319 163.8	1,019,214 N/A	116.349 N/A
100,440 3,668 14,376	100,440 3,477 14,306	97,200 3,046 15,073	721,835 228,217 69,162	82.401 26.052 7.896
or additional calculat quirements.	,	20,070	55,252	,,,,,,
0	0	0	0	0.000
0.000 0	0.000 0	0.000 0	0	0.000
0.000	0.000	0.000		
ıts will be added.				
14,376	14,306	15,073	69,162	7.896

July	August	September	ANNUAL	aMW
100,440	100,440	97,200	721,835	82.401
42,751	42,751	41,372	503,359	57.461
57,689	57,689	55,828	218,476	24.940
100,440	100,440	97,200	721,835	82.401
10.615	10 575	11 202	47.045	F 472
-19,615	-18,575	-11,293	-47,945	-5.473
-26.364	-24.966	-15.685		
3,668	3,477	3,046	228,217	26.052
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	2022 9 400 320	9 Annual O	aMW
118,484 161.786 100,440 23,283 0 42,751 0.038 0.538	118,223 156.652 100,440 22,052 0 42,751 0.039 0.581 0.441	115,319 163.785 97,200 14,339 0 41,372 0.078 0.556 0.444	1,019,214 721,835 262,798 0 503,359 1.000	116.349 82.401 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.11721% 0.11721% -2,509 -684	0.11721% 0.11721% -2,287 -699	0.11721% 0.11721% -716 247		

\$234,234	\$234,234	\$234,234	\$2,810,808	
(\$38,673)	(\$38,673)	(\$38,673)	(<mark>\$464,076)</mark>	
(\$92,392)	(\$82,026)	(\$20,153)	\$10,691	
(\$14,612)	(\$18,763)	\$7,146	\$212,775	
\$0	\$0	\$0	\$0	
\$88,557	\$94,772	\$182,554	\$2,570,198	
4,109	4,015	3,516	43,753	9
2,060	1,947	1,993	25,413	7
1,600	1,728	2,800	39,008	8
1,376	1,248	2,240	30,663	8

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	105.281	Gross Requirements 7/
NLSL Resources 2/	71.333	New Resources 8/
Existing Resources 3/	27.594	Net Requirements (NR) 9/
Gross Requirements 4/	6.354	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	18.227	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Res
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast i	customer	the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	sonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh	bit A and do	9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	. Existing Resources	less New Resources.
can be removed in the second year	of a Rate Period.	10/ T2 Amounts based on customer's electio
See page 3 for removal of Existing F	esource calculations.	September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into section
Net Requirement calculation (prelin	•	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C	utputs spreadsheet	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t		
Above-RHWM Load, if RHWM is les	s than Gross Req.	

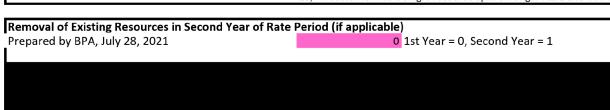
Monthly Net Requirement Calculations (with Block Amounts)

	October	November	December
Hours	744	721	744
Step 4: Monthly Tier 1 Block Amount Calculatio	ns		
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	1,892	8,293	7,514
Monthly T2 Block Amounts (MWh)	0	0	0
	13/ Exhibit C, Section	n 1.2.1.4 states that mo	nthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
, , , , , , , ,	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

3.0	12.0	10.0
3.0	12.0	10.0
3.0	12.0	10.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within	-month Block Amounts
rounded to a whole no	umber. The diurnal an	nounts go into section :
2,232	8,652	7,440
	3.0 3.0 15/ Shaped within-mand rounded to a whole no	3.0 12.0 3.0 12.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal and

TRL Forecast Energy (MWh)	22,160	44,654	52,077
TRL Forecast Peak (MW)	132.6	149.7	157.1
NLSL Resources (MWh)	0	14,420	14,880
Existing Resources (MWh)	72,838	38,393	53,315
Monthly Gross Requirements (MWh)	-50,678	-8,159	-16,118
	16/ TRL Forecast subm	itted by customer and	approved by BPA (or
	Existing Resources from	m Exhibit A. Monthly (Gross Requirements e
New Specified Resources (MWh)	0	0	0
New Specified Resources (aMW)	0.000	0.000	0.000
. , ,	0.000 0	0.000 0	0.000 0
Unspecified Resource Amts (MWh)			
Unspecified Resource Amts (MWh)	0	0.000	0.000
Unspecified Resource Amts (MWh)	0 0.000	0 0.000 souces can be added to	0 0.000 o serve Above-RHWM
New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0 0.000 17/ New Specified Res	0 0.000 souces can be added to	0 0.000 o serve Above-RHWM

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
NLSL Forecast (MWh)	October 0	November 14.420	December 14,880
INLSE POLECASE (INIWIT)	U	14,420	14,000
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	-27,871
Updated Resources Serving NLSL (MWh)	0	14,420	14,880
	18/ Original resource	amounts from Exhibit	A. Update NLSL resou
Change to Existing Resources (MWh)	42,751	26,952	31,212
Change to Existing Resources (aMW)	57.461	37.381	41.952
Updated Total Existing Resources (MWh)	72,838	38,393	53,315
Updated Total Existing Resources (aMW)	97.901	53.250	71.660
1	19/ If customer has a	single resource split a	mongst NLSL and non-I



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	2021	2021
Prepared by BPA, July 28, 2021		10	11	12
RHWM	24.581	416	400	416
		328	321	328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	52,077
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	14,880
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
5		0.440	0.000	0.004
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790	3,537,945	3,223,873
	1,633,134	2,227,488	2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.00	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh) FY2022 Tier 1 Power Charges without Low Density Dis	0.09432%	0.09432%	0.09432%
	0.09432%	0.09432%	0.09432%
	-1,507	1,463	1,119
	-556	1,751	998

Composite Charge	\$188,491	\$188,491	\$188,491
Non-Slice Charge	(\$31,120)	(\$31,120)	(\$31,120)
Load Shaping - HLH	(\$45,086)	\$46,392	\$43,382
Load Shaping - LLH	(\$15,729)	\$51,025	\$31,989
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$96,556	\$254,788	\$232,742
Steps in calculating Load Shaping Billing Determi	<u>inants</u>		
System Shaped Load HLH (MWh)	2,755	3,337	3,041
System Shaped Load LLH (MWh)	1,540	2,101	2,282
Actual Tier 1 Load HLH (MWh)	1,248	4,800	4,160
Actual Tier 1 Load LLH (MWh)	984	3,852	3,280

tion		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
6.354 0.000 6.354		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 6.354 6.354	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
less T2 ources and ater than		Non-Slice TOCA TOCA		0.09432% 0.09432%	
customer needs T2 remarketing Contract. ent Amounts		Notes: 11/ Tier 1 Block Amount Annual Tier 1 Block Amo 12/ TOCA equals minim divided by the Sum of R Non-Slice TOCA equals 1	ounts (in aMW) go in um of Net Requirem HWM. Sum of RHW	to section 1.1 of Exhibi ent or RHWM,	
2.5 of Exhibit C. irements.					
January	February	March	April	May	
744	672	743	720	744	June 720
744			720		720
0.190	0.168	0.159	0.010	0.000 0	720
744			720	0.000	720
0.190 10,575 0	0.168 9,351 0	0.159 8,850	0.010 557 0	0.000 0 0	0.000 0 0

14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

10,416 9,408 8,916 720 0

50,733	96,860	102,291	95,182	93,896	89,661
200.4	190.8	183.8	175.8	171.9	159.6
14,880	67,200	74,300	72,000	74,400	72,000
39,102	2,574	2,846	3,802	11,203	7,456
-3,249	27,086	25,145	19,380	8,293	10,205

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

(3,249) 27,086 25,145 19,380 8,293 10,205

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct Lo	oad, Mill starts in Fe	b, Crypto flat at 20 M	1W starting Nov	
January	February	March	April	May	June
14,880	67,200	74,300	72,000	74,400	72,000
42,751	38,614	42.751	41,372	42,751	41,372
-27,871	28,586	31,549	30,628	31,649	30,628
14,880	67,200	74,300	72,000	74,400	72,000
rces in Exhibit A to mat	ch NLSL forecast.				
27,871	-4,344	-4,194	-29,566	-31,649	-30,628
37.461	-6.464	-5.645	-41.064	-42.539	-42.539
39,102	2,574	2,846	3,802	11,203	7,456
52.556	3.830	3.830	5.281	15.058	10.356
NLSL load, then balance the single resource amounts to match the NLSL forecast keeping the total dedicated amounts the same.					

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022	2022	2022	2022	2022	2022
1	2	3	4	5	6
400	384	432	416	400	416
344	288	311	304	344	304
50,733 200.391 14,880 11,231 0 42,751 0.190 0.538 0.441	96,860 190.756 67,200 6,918 0 38,614 0.168 0.571	102,291 183.772 74,300 7,040 0 42,751 0.159 0.581 0.440	95,182 175.781 72,000 33,368 0 41,372 0.010 0.578 0.422	93,896 171.924 74,400 42,852 0 42,751 0.000 0.538 0.462	89,661 159.600 72,000 38,084 0 41,372 0.000 0.578 0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January	February	March	April	May	June
400	384	432	416	400	416
344	288	311	304	344	304
2,651,580	2,346,690	2,961,839	2,307,314	3,495,710	3,952,933
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
3,099	3,163	2,390	-1,760	-3,297	-3,728
2,921	2,435	1,977	-1,051	-1,596	-1,500

\$188,491	\$188,491	\$188,491	\$188,491	\$188,491	\$188,491
(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)
\$106,266	\$110,027	\$65,903	(\$36,455)	(\$53,678)	(\$63,942)
\$75,499	\$68,887	\$56,220	(\$26,976)	(\$26,012)	(\$15,928)
\$0	\$0	\$0	\$0	\$0	\$0
\$339,136	\$336,285	\$279,494	\$93,940	\$77,681	\$77,501
2,501					
	2 2 2 2	2 704	2 170	2 207	2 720
,	2,213	2,794	2,176	3,297	3,728
1,895	2,213 1,597	2,794 1,755	2,176 1,355	3,297 1,596	3,728 1,500
,	,	,	,	,	,

DENID OPEILLE DILID, no

PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
2,115	2,171	4,341	55,658	6.354
0	0	0	0	0.000
N1 / A	N1/A	21/2		
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				

hours in the month, anth, a lin cell O50. 2,232 2,232 4,320 56,568 6.458	hours in the month, inth, I in cell O50.	3.0 3.0 3.0	3.0 3.0 3.0	6.0 6.0 6.0	56,568	6.458
2,232 2,232 4,320 56,568 <i>6.458</i>	2,232 2,232 4,320 56,568 6.458	hours in the month, onth,	5.0	0.0		
		2,232	2,232	4,320	56,568	6.458

92,444 161.8	92,183 156.7	90,119 163.8	922,259 N/A	105.281 N/A
74,400	74,400	72,000	624,880	71.333
3,668 14,376	3,477 14,306	3,046 15,073	241,720 55,659	27.594 6.354
or additional calculati	,	13,073	33,039	0.334
quirements.				
0	0	0	0	0.000
0.000	0.000	0.000	-	
0	0	0	0	0.000
0.000	0.000	0.000		
ı, ıts will be added.				
14,376	14,306	15,073	55,659	6.354

July	August	September	ANNUAL	aMW
74,400	74,400	72,000	624,880	71.333
42,751	42,751	41,372	503,359	57.461
31,649	31,649	30,628	121,521	13.872
74,400	74,400	72,000	624,880	71.333
-19,615	-18,575	-11,293	-21,078	-2.406
-26.364	-24.966	-15.685		
3,668	3,477	3,046	241,720	27.594
4.930	4.673	4.231		



	2022 7 400 344	2022 8 432 312	2022 9 Annual 400 320	aMW
92,444 161.786 74,400 23,283 0 42,751 0.038 0.538 0.441	92,183 156.652 74,400 22,052 0 42,751 0.039 0.581 0.441	90,119 163.785 72,000 14,339 0 41,372 0.078 0.556 0.444	624,880 262,798 0	105.281 71.333 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.09432% 0.09432% -2,106 -626	0.09432% 0.09432% -1,935 -631	0.09432% 0.09432% -429 316		

\$188,491	\$188,491	\$188,491	\$2,261,892	
(\$31,120)	(\$31,120)	(\$31,120)	(\$373,440)	
(\$77,573)	(\$69,398)	(\$12,085)	\$13,753	
(\$13,366)	(\$16,932)	\$9,151	\$177,828	
\$0	\$0	\$0	\$0	
\$66,432	\$71,041	\$154,437	\$2,080,033	
3,306	3,231	2,829	35,209	7
1,658	1,567	1,604	20,450	5
1,200	1,296	2,400	31,680	6
1,032	936	1,920	24,888	6

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	145.895	Gross Requirements 7/
NLSL Resources 2/	111.947	New Resources 8/
Existing Resources 3/	17.315	Net Requirements (NR) 9/
Gross Requirements 4/	16.633	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	<u>7.948</u>	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Re
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gre
approved by BPA (or BPA forecast i		the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	asonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh		9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	J.	less New Resources.
can be removed in the second year		10/ T2 Amounts based on customer's electio
See page 3 for removal of Existing I		September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	•	If T2 Amounts, then amounts go into section
Net Requirement calculation (preli	•	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	re-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C		
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	.,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

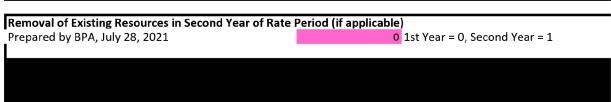
Monthly Net Requirement Calculations (with Block Amounts)

	October	November	December		
Hours	744	721	744		
Step 4: Monthly Tier 1 Block Amount Calculations					
Monthly Block Shaping Factors	0.034	0.149	0.135		
Monthly T1 Block Amounts (MWh)	4,954	21,710	19,670		
Monthly T2 Block Amounts (MWh)	0	0	0		
	13/ Exhibit C, Section 1.2.1.4 states that monthly Tier 1 Block amou				
	Shaping Factors are in	n Exhibit C, Section 1.2.	13		
Diurnal Shaping Factors					
Monthly Block HLH Shaping Factors	N/A	N/A	N/A		
Monthly Block LLH Shaping Factors	N/A	N/A	N/A		
,	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom		

7.0	30.0	26.0
7.0	30.0	26.0
7.0	30.0	26.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within-	-month Block Amounts
rounded to a whole nu	ımber. The diurnal am	ounts go into section :
5,208	21,630	19,344
	7.0 7.0 15/ Shaped within-moand rounded to a whole number of the state	7.0 30.0 7.0 30.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal am

Step 5: Net Requirement Calculations (and Ur	nspecified Resources Amounts)			
TRL Forecast Energy (MWh)	22,160	44,654	115,317		
TRL Forecast Peak (MW)	132.6	149.7	157.1		
NLSL Resources (MWh)	0	14,420	78,120		
Existing Resources (MWh)	72,838	38,393	3,234		
Monthly Gross Requirements (MWh)	-50,678	-8,159	33,963		
	16/ TRL Forecast submitted by customer and approved by BPA (or I				
	Existing Resources from	m Exhibit A. Monthly	Gross Requirements ec		
New Specified Resources (MWh)	0	0	0		
New Specified Resources (aMW)	0.000	0.000	0.000		
Unspecified Resource Amts (MWh)	0	0	0		
Unspecified Resource Amts (aMW)	0.000	0.000	0.000		
	17/ New Specified Resouces can be added to serve Above-RHWM				
	then customer may do	so but the amounts w	vill be reduced to matc		
Net Requirement Forecast (MWh)	(50,678)	(8,159)	33,963		
,		equals TRL less NLSLs			

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	14,420	78,120
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	35,369
Updated Resources Serving NLSL (MWh)	0	14,420	78,120
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoul
Change to Existing Resources (MWh)	42,751	26,952	-18,869
Change to Existing Resources (aMW)	57.461	37.381	-25.362
Updated Total Existing Resources (MWh)	72,838	38,393	3,234
Updated Total Existing Resources (aMW)	97.901	53.250	4.347
	19/ If customer has a	single resource split a	mongst NLSL and non-N



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ar	2021	20	21 2021
Prepared by BPA, July 28, 2021		10		11 12
RHWM	24.581	416	4	00 416
		328	3	21 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	115,317
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	78,120
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh)	0.24691% 0.24691% -4,300 -1,736	0.24691% 0.24691% 3,264 4,130	0.24691% 0.24691% 2,856 2,554
FY2022 Tier 1 Power Charges without Low Density Disc	counts or Irrigation Rate	<u> Discounts</u>	

Composite Charge	\$493,429	\$493,429	\$493,429
Non-Slice Charge	(\$81,466)	(\$81,466)	(\$81,466)
Load Shaping - HLH	(\$128,648)	\$103,516	\$110,696
Load Shaping - LLH	(\$49,087)	\$120,351	\$81,869
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$234,228	\$635,830	\$604,528
Steps in calculating Load Shaping Billing Determ	<u>ninants</u>		
System Shaped Load HLH (MWh)	7,212	8,736	7,960
System Shaped Load LLH (MWh)	4,032	5,500	5,974
Actual Tier 1 Load HLH (MWh)	2,912	12,000	10,816
Actual Tier 1 Load LLH (MWh)	2,296	9,630	8,528

		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)				
16.633 0.000 16.633		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 16.633 16.633		
0.000		TOCAs 12/				
		Sum of RHWM		6736.361		
ess T2 ources and ater than		Non-Slice TOCA TOCA		0.24691% 0.24691%		
customer needs 2 remarketing contract. ent Amounts		Annual Tier 1 Block Amo 12/ TOCA equals minim	otes: 1/ Tier 1 Block Amounts equal Net Requirement less Tier 2 Amounts. nnual Tier 1 Block Amounts (in aMW) go into section 1.1 of Exhibit C. 2/ TOCA equals minimum of Net Requirement or RHWM, ivided by the Sum of RHWM. Sum of RHWM in cell J18.			
made by the		Non-Slice TOCA equals		VI III CEII J I S.		
2.5 of Exhibit C. irements.						
Tements.						
January 744	February 672	March 743	April 720	May 744	June 720	
January	•			-		
January	•			-		
January 744	0.168 24,478	743	0.010 1,457	0.000 0	720	
January 744 0.190 27,684 0	0.168 24,478 0	743 0.159	0.010 1,457 0	0.000 0 0	0.000 0 0	

37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

27,528 24,192 23,033 1,440 0

113,973	100,220	134,983	126,862	126,632	121,341
200.4	190.8	183.8	175.8	171.9	159.6
78,120	70,560	106,992	103,680	107,136	103,680
3,073	2,574	2,846	3,802	8,002	6,729
32,780	27,086	25,145	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 25,145 19,380 11,494 10,932

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

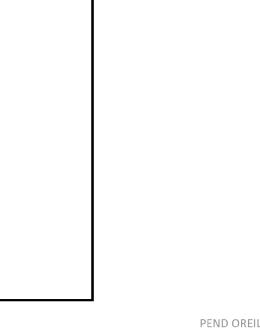
	Revised: No Oct Lo	oad, Mill starts in Dec	cember, Crypto ramp	up starting Nov	
January	February	March	April	May	June
78,120	70,560	106,992	103,680	107,136	103,680
42,751	38,614	42,751	41,372	42,751	41,372
35,369	31,946	64,241	62,308	64,385	62,308
78,120	70,560	106,992	103,680	107,136	103,680
rces in Exhibit A to ma	tch NLSL forecast.				
-8,158	-4,344	-4,194	-29,566	-34,850	-31,355
-10.965	-6.464	-5.645	-41.064	-46.841	-43.549
3,073	2,574	2,846	3,802	8,002	6,729
4.130	3.830	3.830	5.281	10.755	9.346
VISI load then balance	e the single resource am	ounts to match the NIS	SI forecast keening the	total dedicated amou	ints the same

NLSL load, then balance the single resource amounts to match the NLSL forecast keeping the total dedicated amounts the same.

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

202. : 400 34	1 2 0 384	2022 3 432 311	2022 4 416 304	2022 5 400 344	2022 6 416 304
113,973	100,220	134,983	126,862	126,632	121,341
200.391	190.756	183.772	175.781	171.924	159.600
78,120	70,560	106,992	103,680	107,136	103,680
11,231	6,918	7,040	33,368	42,852	38,084
0	0	0	0	0	0
42,751	38,614	42,751	41,372	42,751	41,372
0.190	0.168	0.159	0.010	0.000	0.000
0.538	0.571	0.581	0.578	0.538	0.578
0.441	0.425	0.440	0.422	0.462	0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January		March	April	May	June
400		432	416	400	416
344		311	304	344	304
2,651,580		2,961,839	2,307,314	3,495,710	3,952,933
2,009,470		1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
8,253	8,030	6,079	-4,865	-8,631	-9,760
7,766	6,187	5,046	-2,940	-4,178	-3,926

\$493,429	\$493,429	\$493,429	\$493,429	\$493,429	\$493,429
(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)
\$282,995	\$279,356	\$167,596	(\$100,754)	(\$140,517)	(\$167,387)
\$200,762	\$175,043	\$143,515	(\$75,437)	(\$68,094)	(\$41,697)
\$0	\$0	\$0	\$0	\$0	\$0
\$895,720	\$866,362	\$723,074	\$235,772	\$203,352	\$202,879
	·				
6,547	5,794	7,313	5,697	8,631	9,760
	5,794 4,181	7,313 4,595	5,697 3,548	8,631 4,178	9,760 3,926
6,547	,	,	•	,	,



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
				1
0.038	0.039	0.078	1.000	
5,537	5,682	11,365	145,704	16.633
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				

7.0	8.0	16.0	145,055	16.559
7.0	8.0	16.0		
7.0	8.0	16.0		
hours in the month, onth, I in cell O50.				
5,208	5,952	11,520	145,055	16.559

125,180 161.8	124,919 156.7	121,799 163.8	1,278,039 N/A	145.895 N/A
107,136 3,668 14,376 or additional calculati	107,136 3,477 14,306 ions.	103,680 3,046 15,073	980,660 151,682 145,697	111.947 17.315 16.633
0	0	0	0	0.000
0.000 0	0.000 0	0.000 0	0	0.000
0.000 I, its will be added.	0.000	0.000		
14,376	14,306	15,073	145,697	16.633

July	August	September	ANNUAL	aMW
107,136	107,136	103,680	980,660	111.947
42,751	42,751	41,372	503,359	57.461
64,385	64,385	62,308	477,301	54.486
107,136	107,136	103,680	980,660	111.947
40.645	40.575	44.202	444.446	12.604
-19,615	-18,575	-11,293	-111,116	-12.684
-26.364	-24.966	-15.685		
3,668	3,477	3,046	151,682	17.315
4.930	4.673	4.231		



	2022 7 400 344	2022 8 432 312	2022 9 Annual 400 320		aMW
125,18 161.78 107,13 23,283 0 42,752 0.038 0.538 0.441	6 156.6 6 107,1 3 22,05 0 1 42,75 0.03 0.58	52 163. 36 103,6 52 14,3 0 51 41,3 9 0.0 1 0.5	785 680 9 339 2 772 5 78	80,660 1 62,798 3	45.895 11.947 80.000 0.000 57.461
0.089 0.000				1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339		2,999,685	37,328,957	7,599.543
1,757,589		1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.24691% 0.24691% -5,855 -1,932	0.24691% 0.24691% -5,001 -1,605	0.24691% 0.24691% -1,007 921		

\$493,429	\$493,429	\$493,429	\$5,921,148	
(\$81,466)	(\$81,466)	(\$81,466)	(\$977,592)	
(\$215,641)	(\$179,397)	(\$28,334)	(\$16,519)	
(\$41,260)	(\$43,096)	\$26,671	\$429,540	
\$0	\$0	\$0	\$0	
\$155,062	\$189,470	\$410,300	\$5,356,577	
8,655	8,457	7,407	92,169	19
4,340	4,101	4,199	53,534	14
2,800	3,456	6,400	81,232	17
2,408	2,496	5,120	63,823	17

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cale	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	152.891	Crees Requirements 7/
NLSL Resources 2/	118.943	Gross Requirements 7/ New Resources 8/
Existing Resources 3/	13.264	Net Requirements (NR) 9/
Gross Requirements 4/	20.684	Net Requirements (NR) 9/
01033 Nequirements 4/	20.084	Tier 2 Block Amounts 10/
RHWM 5/	24.581	Tiel 2 Block Amounts 10/
INTERVIEW SY	24.561	Notes:
Headroom 6/	3.897	7/ Gross Requirements from Step 1.
ricuariosiii o	3.037	8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Re
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast i		the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	sonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exh	ibit A and do	9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	. Existing Resources	less New Resources.
can be removed in the second year	of a Rate Period.	10/T2 Amounts based on customer's electio
See page 3 for removal of Existing F	tesource calculations.	September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into section
Net Requirement calculation (prelin	ninary	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C	utputs spreadsheet	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	han Gross Req,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

Monthly Net Requirement Calculations (with Block Amounts)

Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	
Step 4: Monthly Tier 1 Block Amount Calculations				
Monthly Block Shaping Factors	0.034	0.149	0.135	
Monthly T1 Block Amounts (MWh)	6,160	26,997	24,461	
Monthly T2 Block Amounts (MWh)	0	0	0	
	13/ Exhibit C, Section 1.2.1.4 states that monthly Tier 1 Block amount			
	Shaping Factors are in	n Exhibit C, Section 1.2.	13	
Diurnal Shaping Factors				
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	
	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom	

Total - T1 Block Amounts (MW/hr)	8.0	37.0	33.0		
HLH - T1 Block Amounts (MW/hr)	8.0	37.0	33.0		
LLH - T1 Block Amounts (MW/hr)	8.0	37.0	33.0		
	15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour		
	and rounded to a whole number. Flat within-month Block Amounts				
	rounded to a whole nu	mber. The diurnal am	nounts go into section :		
	5.050	26.677	04.550		
Tier 1 and Tier 2 Block Amounts (MWh)	5,952	26,677	24,552		

TRL Forecast Energy (MWh)	22,160	105,939	115,317		
TRL Forecast Peak (MW)	132.6	149.7	157.1		
NLSL Resources (MWh)	0	75,705	78,120		
Existing Resources (MWh)	72,838	2,905	3,234		
Monthly Gross Requirements (MWh)	-50,678	27,329	33,963		
	16/ TRL Forecast submitted by customer and approved by BPA (or				
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e		
		•			
New Specified Resources (MWh)	0	0	0		
. , ,		·	•		
New Specified Resources (aMW)	0	0	0		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0 0.000	0 0.000	0 0.000		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0 0.000 0 0	0 0.000 0	0 0.000 0 0		
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0 0.000 0 0.000 17/ New Specified Re	0 0.000 0 0.000	0 0.000 0 0.000 o serve Above-RHWM		
New Specified Resources (MWh) New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0 0.000 0 0.000 17/ New Specified Re	0 0.000 0 0.000 souces can be added to	0 0.000 0 0.000 o serve Above-RHW		

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	75,705	78,120
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	34,333	35,369
Updated Resources Serving NLSL (MWh)	O	75,705	78,120
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoui
Change to Existing Resources (MWh)	42,751	-8,536	-18,869
Change to Existing Resources (aMW)	57.461	-11.839	-25.362
Updated Total Existing Resources (MWh)	72,838	2,905	3,234
Updated Total Existing Resources (aMW)	97.901	4.029	4.347
	19/ If customer has a	single resource split ar	mongst NLSL and non-N

Removal of Existing Resources in Second Year of Rate Period (if applicable)						
Prepared by BPA, July 28, 2021	0 1st Year = 0, Second Year = 1					

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	2021	2021
Prepared by BPA, July 28, 2021		10	11	12
RHWM	24.581	416	400	416
		328	321	328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	105,939	115,317
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	75,705	78,120
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
5 10		0.440	0.000	0.004
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

Prepared by BPA, July 28, 2021

HLH by Month LLH by Month RHWM T1 System Capability HLH (MWh)	October 416 328 2,920,790	November 400 321 3,537,945	December 416 328 3,223,873				
RHWM T1 System Capability LLH (MWh)	1,633,134	2,227,488	2,419,335				
BP-22 Final Proposal Rates							
Composite Rate (TOCA) (\$\$/%)	\$1,998,417	\$1,998,417	\$1,998,417				
Non-Slice Rate (\$\$/%)	(\$329,943)	(\$329,943)	(\$329,943)				
Slice Rate (\$\$/%)	\$0	\$0	\$0				
Load Shaping - HLH (\$\$/MWh)	\$29.92	\$31.71	\$38.76				
Load Shaping - LLH (\$\$/MWh)	\$28.27	\$29.14	\$32.05				
Financial Reserves Policy Surcharge	\$0.00	\$0.00	\$0.00				
Financial Reserves Policy Amount	\$0.0	\$-Millions					
Financial Reserves Policy Surcharge	\$0.00						
FY2022 Billing Determinants	0.007050/	0.007050/	0.007050/				
TOCA %	0.30705%	0.30705%	0.30705%				
Non-Slice TOCA %	0.30705%	0.30705%	0.30705%				
Load Shaping - HLH (MWh)	-5,640	3,937	3,829				
Load Shaping - LLH (MWh)	-2,391	5,037	3,395				
FY2022 Tier 1 Power Charges without Low Density Discounts or Irrigation Rate Discounts							

Composite Charge	\$613,614	\$613,614	\$613,614
Non-Slice Charge	(\$101,309)	(\$101,309)	(\$101,309)
Load Shaping - HLH	(\$168,757)	\$124,834	\$148,416
Load Shaping - LLH	(\$67,581)	\$146,793	\$108,824
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$275,967	\$783,932	\$769,545
Steps in calculating Load Shaping Billing Determi	<u>inants</u>		
System Shaped Load HLH (MWh)	8,968	10,863	9,899
System Shaped Load LLH (MWh)	5,015	6,840	7,429
Actual Tier 1 Load HLH (MWh)	3,328	14,800	13,728
Actual Tier 1 Load LLH (MWh)	2.624	11.877	10.824

ation		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
20.684 0.000 20.684		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 20.684 20.684	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
less T2 ources and ater than		Non-Slice TOCA TOCA		0.30705% 0.30705%	
customer needs T2 remarketing Contract. lent Amounts		Notes: 11/ Tier 1 Block Amour Annual Tier 1 Block Am 12/ TOCA equals minim divided by the Sum of F Non-Slice TOCA equals	ounts (in aMW) go in num of Net Requirem RHWM. Sum of RHW	to section 1.1 of Exhibi ent or RHWM,	
2.5 of Exhibit C. irements.					
January 744	February 672	March 743	April 720	May 744	June 720
0.190	0.168	0.159	0.010	0.000	0.000
34,426 0	30,440 0	28,809 0	1,812 0	0 0	0 0
		ng Factors * Annual Tier 1			
N/A	N/A	N/A	N/A	N/A	N/A

46.0	45.0	39.0	3.0	0.0	0.0
46.0	45.0	39.0	3.0	0.0	0.0
46.0	45.0	39.0	3.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

34,224 30,240 28,977 2,160 0

113,973	100,220	134,983	126,862	126,632	121,341
200.4	190.8	183.8	175.8	171.9	159.6
78,120	70,560	106,992	103,680	107,136	103,680
3,073	2,574	2,846	3,802	8,002	6,729
32,780	27,086	25,145	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 25,145 19,380 11,494 10,932

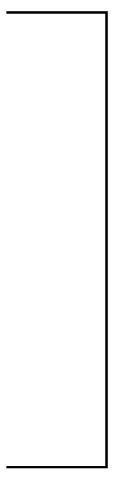
ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

Revised: No Oct Load, Mill starts in Nov, Crypto ramp up starting Nov					
January	February	March	April	May	June
78,120	70,560	106,992	103,680	107,136	103,680
42,751	38,614	42,751	41,372	42,751	41,372
35,369	31,946	64,241	62,308	64,385	62,308
78,120	70,560	106,992	103,680	107,136	103,680
rces in Exhibit A to mat	ch NLSL forecast.				
-8,158	-4,344	-4,194	-29,566	-34,850	-31,355
-10.965	-6.464	-5.645	-41.064	-46.841	-43.549
3,073	2,574	2,846	3,802	8,002	6,729
4.130	3.830	3.830	5.281	10.755	9.346
NLSL load, then balance	the single resource am	ounts to match the NLS	SL forecast keeping the	total dedicated amou	unts the same.

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

	2022 202 1 400 38 344 28	2 34 43	3 4 2 416	2022 5 400 344	2022 6 416 304
113,973 200.391 78,120 11,231 0 42,751 0.190 0.538 0.441	100,220 190.756 70,560 6,918 0 38,614 0.168 0.571	134,983 183.772 106,992 7,040 0 42,751 0.159 0.581 0.440	126,862 175.781 103,680 33,368 0 41,372 0.010 0.578 0.422	126,632 171.924 107,136 42,852 0 42,751 0.000 0.538 0.462	121,341 159.600 103,680 38,084 0 41,372 0.000 0.578 0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January 400 344 2,651 2,009				May 400 344 3,495,710 1,691,935	June 416 304 3,952,933 1,590,174
\$1,998,417		\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943		(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0		\$0	\$0	\$0	\$0
\$34.29		\$27.57	\$20.71	\$16.28	\$17.15
\$25.85		\$28.44	\$25.66	\$16.30	\$10.62
\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
0.30705%		0.30705%	0.30705%	0.30705%	0.30705%
0.30705%		0.30705%	0.30705%	0.30705%	0.30705%
10,258		7,754	-5,837	-10,734	-12,137
9,654		6,415	-3,500	-5,195	-4,883

\$613,614 (<mark>\$101,309)</mark> \$351,758	\$613,614 <mark>(\$101,309)</mark> \$350,491	\$613,614 <mark>(\$101,309)</mark> \$213,769	\$613,614 (\$101,309) (\$120,876)	\$613,614 (\$101,309) (\$174,743)	\$613,614 (\$101,309) (\$208,158)
\$249,554	\$219,564	\$182,445	(\$89,811)	(\$84,680)	(\$51,854)
\$0	\$0	\$0	\$0	\$0	\$0
\$1,113,617	\$1,082,360	\$908,519	\$301,618	\$252,882	\$252,293
8,142	7,206	9,094	7,085	10,734	12,137
8,142 6,170	7,206 5,199	9,094 5,714	7,085 4,412	10,734 5,195	12,137 4,883
,	,	,	,	,	,



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
				20 694
6,885	7,066	14,133	181,191	20.684
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				
'				

9.0	9.0	20.0	180,574	20.613
9.0	9.0	20.0		
9.0	9.0	20.0		
hours in the month, inth, I in cell O50.				
6,696	6,696	14,400	180,574	20.613

125,180 161.8	124,919 156.7	121,799 163.8	1,339,324 N/A	152.891 N/A
107,136 3,668	107,136 3,477	103,680 3,046	1,041,945 116,194	118.943 13.264
14,376	14,306	15,073	181,185	20.684
or additional calculati quirements.	ons.			
0	0	0	0	0.000
0.000	0.000	0.000	U	0.000
0 0.000	0 0.000	0.000	0	0.000
l,	0.000	0.000		
its will be added.				
14,376	14,306	15,073	181,185	20.684

July	August	September	ANNUAL	aMW
107,136	107,136	103,680	1,041,945	118.943
42,751	42,751	41,372	503,359	57.461
64,385	64,385	62,308	538,586	61.482
107,136	107,136	103,680	1,041,945	118.943
-19,615	-18,575	-11,293	-146,604	-16.736
-26.364	-24.966	-15.685		
3,668	3,477	3,046	116,194	13.264
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	2022 9 400 320	9 Annual O	aMW
125,180 161.786 107,136 23,283 0 42,751 0.038 0.538	124,919 156.652 107,136 22,052 0 42,751 0.039 0.581 0.441	121,799 163.785 103,680 14,339 0 41,372 0.078 0.556	1,339,324 1,041,945 262,798 0 503,359 1.000	152.891 118.943 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.30705% 0.30705% -7,163 -2,301	0.30705% 0.30705% -6,629 -2,292	0.30705% 0.30705% -1,211 1,179		

\$613,614	\$613,614	\$613,614	\$7,363,368	
(\$101,309)	(\$101,309)	(\$101,309)	(\$1,215,708)	
(\$263,819)	(\$237,791)	(\$34,077)	(\$18,953)	
(\$49,142)	(\$61,539)	\$34,120	\$536,693	
\$0	\$0	\$0	\$0	
\$199,344	\$212,975	\$512,348	\$6,665,400	
10,763	10,517	9,211	114,619	23
5,397	5,100	5,221	66,573	17
3,600	3,888	8,000	101,120	21
3,096	2,808	6,400	79,454	21

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Calo (in annual aMW)	culation	•	Step 2: Annual Net Requirement Calculation (in annual aMW)				
(m annuar aivivv)		(m annuar alvivv)					
TRL Forecast 1/	139.851	Gross Requirements 7/	26.544				
NLSL Resources 2/	105.904	New Resources 8/	1.963				
Existing Resources 3/	7.403	Net Requirements (NR) 9/	24.581				
Gross Requirements 4/	26.544						
		Tier 2 Block Amounts 10/	0.000				
RHWM 5/	24.581						
		Notes:					
Above-RHWM Load 6/	1.963	7/ Gross Requirements from Step 1.					
		8/ New Resources equal Above-RHWN	1 Load less T2				
Notes:		Amounts. If customer has New Specifi	ied Resources and				
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amo	unt greater than				
approved by BPA (or BPA forecast it	fcustomer	the customer's Above-RHWM Load, th	en the customer needs				
submitted forecast deemed not reasonable.)		to determine the order of resource rer	moval/T2 remarketing				
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/	/Block Contract.				
3/ Existing Resources are from Exhi	ibit A and do	9/ Net Requirements equals Gross Rec	quirement Amounts				
not include resources serving NLSLs	. Existing Resources	less New Resources.					
can be removed in the second year	of a Rate Period.	10/ T2 Amounts based on customer's e	election made by the				
See page 3 for removal of Existing R	Resource calculations.	September 30, 2011 Notice Deadline.					
4/ Gross Requirements is a prelimin	nary	,	If T2 Amounts, then amounts go into section 2.5 of Exhibit C.				
Net Requirement calculation (prelin	ninary	T2 Amounts plus T1 Amounts equal Ne	T2 Amounts plus T1 Amounts equal Net Requirements.				
since New Resources to serve Abov	e-RHWM						
Load have not yet been added.)							
5/ RHWM is from RHWM Process O	• •						
published on September 28, 2012, v	with updates						
for Provisional HWM if necessary.							
6/ Headroom, if RHWM is greater th	nan Gross Req,						
Above-RHWM Load, if RHWM is les	s than Gross Reg.						

Monthly Net Requirement Calculations (with Block Amounts) Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	January 744	February 672
Step 4: Monthly Tier 1 Block Amount Calculati	ons				
Monthly Block Shaping Factors	0.034	0.149	0.135	0.190	0.168
Monthly T1 Block Amounts (MWh)	7,321	32,084	29,069	40,913	36,175
Monthly T2 Block Amounts (MWh)	Ô	Ô	Ô	0	Ô
		n 1.2.1.4 states that mo n Exhibit C, Section 1.2.		unts in MWh are equal	to the Monthly Shapi
Diurnal Shaping Factors					
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom	er elected Her 1 Block	t within-month shaped
Total - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
HLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
LLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
		ole number. Flat within	-month Block Amounts	are megawatt per ho	
Tier 1 and Tier 2 Block Amounts (MWh)			-month Block Amounts	are megawatt per ho	ur amounts equal to t
	rounded to a whole r	ole number. Flat within number. The diurnal am 31,724	-month Block Amounts nounts go into section 1	are megawatt per hou L.3 of Exhibit C. Due to	ur amounts equal to the rounding the total m
Step 5: Net Requirement Calculations (and Uns	rounded to a whole r 7,440 specified Resources Amount 80,313	ole number. Flat within number. The diurnal am 31,724	-month Block Amounts nounts go into section 1 29,016 95,350	are megawatt per hot L.3 of Exhibit C. Due to 40,920 121,605	ur amounts equal to the crounding the total management of the second of the control of the contr
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6	ole number. Flat within number. The diurnal am 31,724 (s) 86,590 149.7	-month Block Amounts nounts go into section 1 29,016 95,350 157.1	are megawatt per hot 1.3 of Exhibit C. Due to 40,920 121,605 200.4	ur amounts equal to to prounding the total magnetic and a second
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153	31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153	121,605 200.4 85,752	107,113 190.8 77,453
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685	31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042	121,605 200.4 85,752 3,073	107,113 190.8 77,453 2,574
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub	31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or E	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom	107,113 190.8 77,453 2,574 27,086 er forecast not approx
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub	31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or E	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom	107,113 190.8 77,453 2,574 27,086 er forecast not approx
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh) New Specified Resources (MWh) New Specified Resources (aMWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub Existing Resources fro	31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or EGross Requirements eq 0 0.000	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom uals TRL less NLSLs an	107,113 190.8 77,453 2,574 27,086 er forecast not approvid Exisiting Resources.
Tier 1 and Tier 2 Block Amounts (MWh) Step 5: Net Requirement Calculations (and Unstance of TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh) New Specified Resources (aMWh) Unspecified Resource Amts (MWh) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMWh)	rounded to a whole rounded to a whole rounded to a whole round rou	as solve number. Flat within number. The diurnal am 31,724 86,590 149.7 56,356 2,905 27,329 mitted by customer and om Exhibit A. Monthly of	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or E	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom uals TRL less NLSLs an	107,113 190.8 77,453 2,574 27,086 er forecast not approxid Exisiting Resources.

	'				st dedicate New Specifie oad. If New Specified Re
Net Requirement Forecast (MWh)	6,015	25,914	25,695	31,320	25,767
	18/ Net Requirements	equals TRL less NLS	s, Existing Resources, Ne	ew Resources (Specifi	ed and Unspecified), and

	October	November	December	January	February
LSL Forecast (MWh)	58,153	56,356	58,153	85,752	77,453
esources Serving an NLSL (MWh)	42,751	41,372	42,751	42,751	38,614
hange to NLSL Resources (MWh)	15,402	14,984	15,402	43,001	38,839
pdated Resources Serving NLSL (MWh)	58,153	56,356	58,153	85,752	77,453
	18/ Original resource	e amounts from Exhibit	A. Update NLSL resour	rces in Exhibit A to ma	tch NLSL forecast.
hange to Existing Resources (MWh)	-15,402	-8,536	-12,061	-8,158	-4,344
hange to Existing Resources (aMW)	-20.702	-11.839	-16.212	-10.965	-6.464
pdated Total Existing Resources (MWh)	14,685	2,905	10,042	3,073	2,574
pdated Total Existing Resources (aMW)	19.737	4.029	13.497	4.130	3.830
	19/ If customer has a	a single resource split a	mongst NLSL and non-N	NLSL load, then balanc	e the single resour
	,				

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is applicable for customers that have Existing Resour that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's forecast of Customer's Net Requirement for each

Customer Specific Data for Fiscal Year 2021 2021 2022 2022

26981432 BPA-2022-00699-F 0781

Prepared by BPA, July 28, 2021		10	11	12	1	2
RHWM	24.581	416	400	416	400	384
		328	321	328	344	288
BES Number	10306					
T2 Block Amounts	0					
TRL Forecast - Energy (MWh)		80,313	86,590	95,350	121,605	107,113
TRL Forecast - Peak (MW)		132.585	149.663	157.084	200.391	190.756
NLSL Forecast		58,153	56,356	58,153	85,752	77,453
Existing		30,087	11,441	22,103	11,231	6,918
New		0	0	0	0	0
NLSL		42,751	41,372	42,751	42,751	38,614
Block Shaping Factors		0.034	0.149	0.135	0.190	0.168
HLH Shaping Factors		0.559	0.555	0.559	0.538	0.571
LLH Shaping Factors		0.419	0.445	0.462	0.441	0.425
5		0.440	0.000	0.004	0.027	0.000
Existing Resource Removal Shape		0.119	0.039	0.084	0.037	0.020
New Resource Removal Shape		0.000	0.000	0.000	0.000	0.000

Customer Charges and Load Shaping Charges Prepared by BPA, July 28, 2021

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328	January 400 344	February 384 288
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335	2,651,580 2,009,470	2,346,690 1,693,144
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.29 \$25.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.79 \$28.29 \$0.00
FY2022 Billing Determinants TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%

•					
Non-Slice TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%
Load Shaping - HLH (MWh)	-6,498	4,690	4,460	12,324	12,173
Load Shaping - LLH (MWh)	-2,679	5,996	3,964	11,587	9,374
FY2022 Tier 1 Power Charges without Low Density Disc	ounts or Irrigation Ro	ate Discounts			
Composite Charge	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222
Non-Slice Charge	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)
Load Shaping - HLH	(\$194,419)	\$148,721	\$172,873	\$422,603	\$423,496
Load Shaping - LLH	(\$75,744)	\$174,720	\$127,041	\$299,535	\$265,183
Financial Reserves Policy Surcharge	\$0	\$0	\$0	\$0	\$0
Total	\$338,663	\$932,267	\$908,740	\$1,330,964	\$1 , 297,505
Steps in calculating Load Shaping Billing Determinants					
System Shaped Load HLH (MWh)	10,658	12,910	11,764	9,676	8,563
System Shaped Load LLH (MWh)	5,959	8,128	8,828	7,333	6,178
Actual Tier 1 Load HLH (MWh)	4,160	17,600	16,224	22,000	20,736
Actual Tier 1 Load LLH (MWh)	3,280	14,124	12,792	18,920	15,552

Step 3: Critical Slice & Block Amounts (with TOCAs)

(in annual aMW)

 Tier 2 Block Amounts
 0.000

 Tier 1 Block Amounts 11/
 24.581

 Net Requirements
 24.581

TOCAs 12/

Sum of RHWM 6736.361

Non-Slice TOCA 0.36490% TOCA 0.36490%

Notes:

11/ Tier 1 Block Amounts equal Net Requirement less Tier 2 Amounts. Annual Tier 1 Block Amounts (in aMW) go into section 1.1 of Exhibit C. 12/ TOCA equals minimum of Net Requirement or RHWM, divided by the Sum of RHWM. Sum of RHWM in cell J18. Non-Slice TOCA equals TOCA.

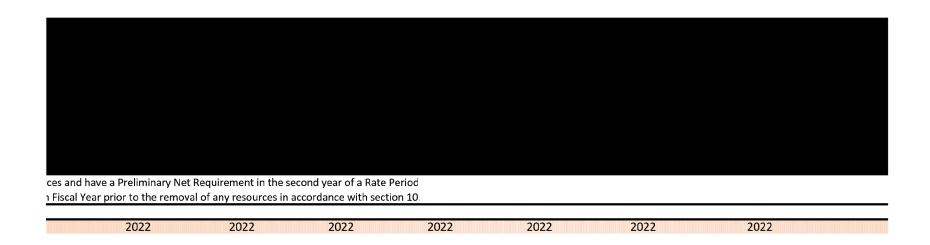
PEND OREILLE PUD, page 2

March 743	April 720	May 744	June 720	July 744	August 744	September 720	ANNUAL 8,760
0.450	0.040	0.000	0.000	0.000	0.000	0.070	1 000
0.159	0.010	0.000	0.000	0.038	0.039	0.078	1.000
34,237	2,153	0	0	8,183	8,398	16,796	215,330
0	O	0	0	0	0	0	0
tors " Annual Her	· 1 Block Amounts in aN	vivv (see Step 3) * Hot	urs in Fiscal Year				
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
ir Net Requireme	nt. Not applicable to co	ustomers who elected	l flat Tier 1 block with	in-month shape.		•	
46.0	3.0	0.0	0.0	11.0	11.0	23.0	214,654
100	2 ∩	0.0	0.0	11.0	11.0	23.0	
46.0	3.0	0.0					
46.0	3.0	0.0	0.0	11.0	11.0	23.0	
46.0 ulated per 1.2.14	3.0 of Exhibit C multiplied	0.0 by the diurnal shapinք	0.0 g factor, divided by the	11.0 e hours in the month,			
46.0 ulated per 1.2.14 othly MWh amour	3.0 of Exhibit C multiplied nts calculated per 1.2.1	0.0 by the diurnal shaping 4 of Exhibit C divided	0.0 g factor, divided by the by the hours in the m	11.0 e hours in the month, onth,			
46.0 ulated per 1.2.14 othly MWh amour	3.0 of Exhibit C multiplied	0.0 by the diurnal shaping 4 of Exhibit C divided	0.0 g factor, divided by the by the hours in the m	11.0 e hours in the month, onth,			
46.0 ulated per 1.2.14 ithly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the mawatt-hours calculate	11.0 e hours in the month, onth, ed in cell 050.	11.0	23.0	214 654
46.0 ulated per 1.2.14 othly MWh amour	3.0 of Exhibit C multiplied nts calculated per 1.2.1	0.0 by the diurnal shaping 4 of Exhibit C divided	0.0 g factor, divided by the by the hours in the m	11.0 e hours in the month, onth,			214,654
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the mawatt-hours calculate	11.0 e hours in the month, onth, ed in cell 050.	11.0	23.0	214,654
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the mawatt-hours calculate	11.0 e hours in the month, onth, ed in cell 050.	11.0	23.0	214,654
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the mawatt-hours calculate	11.0 e hours in the month, onth, ed in cell 050.	11.0	23.0	214,654
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, onth, ed in cell 050. 8,184	8,184	23.0 16,560	
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, onth, ed in cell 050.	11.0 8,184 103,535	23.0 16,560 101,104	1,225,09
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d 2,160 106,167 175.8	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0 100,646 159.6	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8	8,184	16,560 101,104 163.8	1,225,09 [,] N/A
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8 85,636	3.0 of Exhibit C multiplied its calculated per 1.2.1 ied in cell O55 will be d 2,160 106,167 175.8 82,985	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752	11.0 8,184 103,535 156.7 85,752	16,560 101,104 163.8 82,985	1,225,09 N/A 927,715
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8	3.0 of Exhibit C multiplied nts calculated per 1.2.1 led in cell O55 will be d 2,160 106,167 175.8	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0 100,646 159.6	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8	11.0 8,184 103,535 156.7 85,752 3,477	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied its calculated per 1.2.1 ied in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 s for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985	1,225,09 N/A 927,715 64,848
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied hts calculated per 1.2.1 led in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 s for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied its calculated per 1.2.1 ied in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 s for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener to add New Resou	3.0 of Exhibit C multiplied hts calculated per 1.2.1 hed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 6 for additional calcula lequirements.	11.0 8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,094 N/A 927,715 64,848 232,531
46.0 ulated per 1.2.14 Ithly MWh amour tt-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener to add New Resou	3.0 of Exhibit C multiplied hts calculated per 1.2.1 hed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 rgy and peak) goes into urces if customer has A	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 6 for additional calcula lequirements.	11.0 8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,094 N/A 927,715 64,848 232,531

ed Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Load, esources were not added to serve Above-RHWM Load, then Unspecified Resource Amounts will be added.

23,686	17,966	10,034	9,518	12,916	12,846	13,659	215,335
d plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.							

						PEND OREILLE PUD, pa	age 3	
March 85,636	April 82,985	May 85,752	June 82,985	July 85,752	August 85,752	September 82,985	ANNUAL 927,715	
42,751 42,885 85,636	41,372 41,613	42,751 43,001 85,752	41,372 41,613	42,751 43,001	42,751 43,001	41,372 41,613	503,359 424,356	
-4,194	-29,566	-34,850	82,985 -31,355	85,752 -19,615	85,752 -18,575	82,985 -11,293	927,715	
-5.645 2, 846 3.830	-41.064 3,802 5.281	-46.841 8,002 10.755	-43.549 6,729 9.346	-26.364 3,668 4.930	-24.966 3,477 4.673	-15.685 3,046 4.231	64,848	



3	4	5	6	7	8	9 Ai	nnual
432	416	400	416	400	432	400	
311	304	344	304	344	312	320	
113,627	106,167	105,248	100,646	103,796	103,535	101,104	1,225,094 927,715 262,798 0 503,359 1.000
183.772	175.781	171.924	159.600	161.786	156.652	163.785	
85,636	82,985	85,752	82,985	85,752	85,752	82,985	
7,040	33,368	42,852	38,084	23,283	22,052	14,339	
0	0	0	0	0	0	0	
42,751	41,372	42,751	41,372	42,751	42,751	41,372	
0.159	0.010	0.000	0.000	0.038	0.039	0.078	
0.581	0.578	0.538	0.578	0.538	0.581	0.556	
0.440	0.422	0.462	0.422	0.441	0.441	0.444	
0.019	0.133	0.173	0.154	0.089	0.084	0.051	1.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
					PE	END OREILLE PUD, pag	e 4
March	April	May	June	July	August	September	ANNUAL
432	416	400	416	400	432	400	4912
311	304	344	304	344	312	320	3848
2,961,839	2,307,314	3,495,710	3,952,933	3,505,339	3,425,259	2,999,685	37,328,957
1,860,906	1,436,906	1,691,935	1,590,174	1,757,589	1,660,955	1,700,508	21,681,545
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$27.57	\$20.71	\$16.28	\$17.15	\$36.83	\$35.87	\$28.15	
\$28.44	\$25.66	\$16.30	\$10.62	\$21.36	\$26.85	\$28.95	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	
9,064	-7,171	-12,756	-14,424	-8,391	-7,747	-1,746	
7,516	-4,331	-6,174	-5,803	-2,629	-2,629	1,155	
\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$8,750,664
(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$1,444,752)
\$249,901	(\$148,519)	(\$207,665)	(\$247,376)	(\$309,040)	(\$277,877)	(\$49,146)	(\$16,448)
\$213,742	(\$111,140)	(\$100,634)	(\$61,623)	(\$56,165)	(\$70,584)	\$33,433	\$637,764
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,072,469	\$349,167	\$300,527	\$299,827	\$243,621	\$260,365	\$593,113	\$7,927,228
10,808	8,419	12,756	14,424	12,791	12,499	10,946	136,213
6,790	5,243	6,174	5,803	6,413	6,061	6,205	79,116
19,872	1,248	0	0	4,400	4,752	9,200	120,192
14,306	912	0	0	3,784	3,432	7,360	94,462

aMW

24.581 0.000

24.504

24.504

139.851 N/A 105.904 7.403 26.544

1.963

0.000

24.581

aMW 105.904

57.461 48.442 105.904

-22.597

7.403

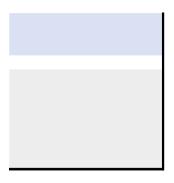
aMW

139.851

105.904 30.000 0.000 57.461

aMW

7,599.543 6736 5,634.497



From: David Hodder

Sent: Thu Sep 09 08:12:52 2021

To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB

Subject: [EXTERNAL] RE: Ponderay Industries PNC 230kV work

Importance: Normal

Todd B at Ponderay will be out of town on the 16th.

David

From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < jmlacambra@bpa.gov>

Sent: Thursday, September 9, 2021 7:21 AM **To:** David Hodder < DHodder@popud.org>

Subject: RE: Ponderay Industries PNC 230kV work

CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hey Dave,

Ops and Electricians work 4-10's so Friday is a no go the 16th is preferred and I know the following week they a	re
pretty busy. I'll get some dates and send them over. In case Ponderay industries can't move things around.	

Jared

From: David Hodder < <u>DHodder@popud.org</u>>
Sent: Wednesday, September 8, 2021 4:00 PM

To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < imlacambra@bpa.gov >

Subject: [EXTERNAL] Ponderay Industries PNC 230kV work

Hi Jared,

The 16th doesn't work for Ponderay Industries, the 17th does. Can you make it work with Kendrick and Marcus?

The October 5th date works for the outage and trip checks. You may want to plan a backup date in case of weather.

I explained the need for the metering and Todd B. said they wanted to take part of their load from each of the 2-75 MVA transformers. So they will need 2 sets of switchgear or one set with 2 feeds and a tie breaker. I also advised

2

them to get a revenue grade metering package on any switchgear they purchase.

Thanks,

Regards,

David J Hodder P.E.

Engineering Manager
Phone 509 447-3137

Cell (b)(6)

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

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Pend Oreille County Public Utility District #1

From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB

Sent: Thu Sep 09 08:34:30 2021

To: David Hodder

Subject: RE: Ponderay Industries PNC 230kV work

Importance: Normal

Gotcha. Is he available the following week?

jared

From: David Hodder < DHodder@popud.org > Sent: Thursday, September 9, 2021 8:13 AM

To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < jmlacambra@bpa.gov>

Subject: [EXTERNAL] RE: Ponderay Industries PNC 230kV work

Todd B at Ponderay will be out of town on the 16th.

David

From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < jmlacambra@bpa.gov>

Sent: Thursday, September 9, 2021 7:21 AM **To**: David Hodder DHodder@popud.org>

Subject: RE: Ponderay Industries PNC 230kV work

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Hey Dave,

Ops and Electricians work 4-10's so Friday is a no go the 16th is preferred and I know the following week they are pretty busy. I'll get some dates and send them over. In case Ponderay industries can't move things around.

Jared

From: David Hodder < <u>DHodder@popud.org</u>>
Sent: Wednesday, September 8, 2021 4:00 PM

To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < imlacambra@bpa.gov >

Subject: [EXTERNAL] Ponderay Industries PNC 230kV work

Hi Jared,

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P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

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Pend Oreille County Public Utility District #1

4

From: Normandeau, Mike (BPA) - PSE-RONAN

Sent: Thu Sep 09 08:36:54 2021

To: Colin Willenbrock

Subject: RE: Net Requirement Extension Request - Please Respond

Importance: Normal

Great. Thank for responding so quickly. We're scheduled for a follow up discussion next week. We'll be sure to update you on this process.

Mike

From: Colin Willenbrock < cwillenbrock@popud.org>

Sent: Thursday, September 9, 2021 9:29 AM

To: Normandeau,Mike (BPA) - PSE-RONAN mrnormandeau@bpa.gov; April Owen aowen@popud.org; Tyler

Whitney <TWhitney@popud.org>

<kbpatton@bpa.gov>; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB <sababaidhan@bpa.gov>

Subject: [EXTERNAL] RE: Net Requirement Extension Request - Please Respond

Mike,

Pend Oreille PUD agrees to the requested extension of time for revisions to Exhibit A and Exhibit C to on or before September 30, 2021.

Thank you, Colin

F. Colin Willenbrock

General Manager

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington Newport, Washington 99156 509.447.3137 | cwillenbrock@popud.org | www.popud.org

From: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

Sent: Wednesday, September 8, 2021 4:55 PM

To: Colin Willenbrock < cwillenbrock@popud.org>; April Owen < aowen@popud.org>

Cc: Moore, Lisa A (BPA) - PSSE-MEAD-GOB | Patton, Kathryn B (BPA) - PSS-SEATTLE

<a href="mailto: kbpatton@bpa.gov; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB sababaidhan@bpa.gov>

Subject: Net Requirement Extension Request - Please Respond

Importance: High

CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Colin,

BPA and Pend Oreille are currently working together to determine Pend Oreille's Net Requirement for Fiscal Year 2022. With the paper mill returning to service and the addition of crypto load that is expected to be a Planned New Large Single Load (NLSL) being served by Pend Oreille, BPA is requesting additional time to finalize the forecast and complete the Net Requirement calculation. The Regional Dialogue contract stipulates that BPA provide revisions to Exhibit A and Exhibit C by September 15th, we may not be able to provide the revisions by that date. BPA will provide the revisions to you on or before September 30, 2021.

If this is acceptable, would you please reply with your acceptance.

Respectfully Yours,

Michael Normandeau

Michael R. Normandeau

Account Executive | PSE - Power Services

Bonneville Power Administration

bpa.gov | P 406-676-2669 | C(b)(6)

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01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@

01D52C3E.09FCE1E0cid:image012.jpg@01D52C3E.09FCE1E0

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Pend Oreille County Public Utility District #1

From: Colin Willenbrock

Sent: Thu Sep 09 08:38:31 2021

To: Normandeau, Mike (BPA) - PSE-RONAN

Subject: [EXTERNAL] RE: Net Requirement Extension Request - Please Respond

Importance: Normal

Sounds good. Thanks again for all of your help on this.

Colin

From: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

Sent: Thursday, September 9, 2021 8:37 AM **To:** Colin Willenbrock cwillenbrock@popud.org

Subject: RE: Net Requirement Extension Request - Please Respond

Great. Thank for responding so quickly. We're scheduled for a follow up discussion next week. We'll be sure to update you on this process.

Mike

ı

From: Colin Willenbrock < cwillenbrock@popud.org> Sent: Thursday, September 9, 2021 9:29 AM To: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov >; April Owen < aowen@popud.org >; Tyler Whitney < TWhitney@popud.org > Cc: Moore, Lisa A (BPA) - PSSE-MEAD-GOB < lamoore@bpa.gov >; Patton, Kathryn B (BPA) - PSS-SEATTLE <a href="mailto: kbpatton@bpa.gov; Babaidhan,Sami A (BPA) - PSSE-MEAD-GOB sababaidhan@bpa.gov> Subject: [EXTERNAL] RE: Net Requirement Extension Request - Please Respond Mike. Pend Oreille PUD agrees to the requested extension of time for revisions to Exhibit A and Exhibit C to on or before September 30, 2021. Thank you, Colin F. Colin Willenbrock **General Manager**

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156 509.447.3137 | cwillenbrock@popud.org | www.popud.org

From: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

Sent: Wednesday, September 8, 2021 4:55 PM

To: Colin Willenbrock < cwillenbrock@popud.org; April Owen < aowen@popud.org;

Cc: Moore, Lisa A (BPA) - PSSE-MEAD-GOB < lamoore@bpa.gov >; Patton, Kathryn B (BPA) - PSS-SEATTLE

<a href="mai

Subject: Net Requirement Extension Request - Please Respond

Importance: High

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Dear Colin,

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If this is acceptable, would you please reply with your acceptance.

Respectfully Yours,

Michael Normandeau

Michael R. Normandeau

Account Executive | PSE – Power Services

Bonneville Power Administration bpa.gov | P 406-676-2669 | C (b)(6)

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Pend Oreille County Public Utility District #1

5

From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB

Sent: Mon Sep 13 09:20:45 2021

To: David Hodder

Cc: Keyannie, Kendrick (BPA) - TFSD-BELL; Walker, Nichloas P (BPA) - TFSB-BELL; Fedchun, Pavel (BPA) - TFSB-USFS NEWPORT

Subject: RE: Ponderay Industries PNC 230kV work

Importance: Normal

Hey David,

Kendrick is available on the 17th and can update the electricians. What time on the 17th works to meet up on site and do the walk through? As a reminder please bring any schematics you have for POPUD and PNC.

Thanks

jared

From: David Hodder < DHodder@popud.org > Sent: Thursday, September 9, 2021 8:13 AM

To: Lacambra,Jared M (BPA) - TPCF-MEAD-GOB < jmlacambra@bpa.gov>

Subject: [EXTERNAL] RE: Ponderay Industries PNC 230kV work

Todd B at Ponderay will be out of town on the 16 th .
David
From: Lacambra,Jared M (BPA) - TPCF-MEAD-GOB < imlacambra@bpa.gov > Sent: Thursday, September 9, 2021 7:21 AM To: David Hodder < DHodder@popud.org > Subject: RE: Ponderay Industries PNC 230kV work
CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Hey Dave,
Ops and Electricians work 4-10's so Friday is a no go the 16 th is preferred and I know the following week they are pretty busy. I'll get some dates and send them over. In case Ponderay industries can't move things around.
Jared
2

From: David Hodder < DHodder@popud.org> Sent: Wednesday, September 8, 2021 4:00 PM To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < imlacambra@bpa.gov > Subject: [EXTERNAL] Ponderay Industries PNC 230kV work Hi Jared, The 16th doesn't work for Ponderay Industries, the 17th does. Can you make it work with Kendrick and Marcus? The October 5th date works for the outage and trip checks. You may want to plan a backup date in case of weather. I explained the need for the metering and Todd B. said they wanted to take part of their load from each of the 2-75 MVA transformers. So they will need 2 sets of switchgear or one set with 2 feeds and a tie breaker. I also advised them to get a revenue grade metering package on any switchgear they purchase. Thanks, Regards,

David J Hodder P.E.

Engineering Manager

Phone 509 447-3137

Cell (b)(6)

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

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Pend Oreille County Public Utility District #1

4

From: April Owen
Sent: Thu Sep 16 09:49:43 2021
To: Normandeau,Mike (BPA) - PSE-RONAN
Cc: Patton,Kathryn B (BPA) - PSS-SEATTLE
Bcc: mrnormandeau@bpa.gov
Subject: [EXTERNAL] FW: Check in prior to check in
Importance: Normal
Attachments: FY2022_NetRequirement_PEND_OREILLE_Draft at different NLSL loads_210901.xlsx; FW: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx
Hi Mike,
It looks like the Current Net Requirement tab is the same as what was originally calculated at the beginning of July (?). Andres had sent me new TRL numbers based on our public comment submission in August, but I never saw the results actually put into the net requirement calculation spreadsheet. You can see what he sent in the email attached. I just want to make sure we are all using the same numbers.
Thanks,
April.
1

From: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

Sent: Thursday, September 16, 2021 8:53 AM

To: April Owen <aowen@popud.org> **Subject:** RE: Check in prior to check in

April- here's the most recent set of scenarios. The last tab, current Net Requirement is the one we're using to revise exhibits. Should have the dollar amounts you are looking for. We can go over this during the meeting.

From: April Owen <aowen@popud.org>

Sent: Wednesday, September 15, 2021 5:28 PM

To: Normandeau,Mike (BPA) - PSE-RONAN < <u>mrnormandeau@bpa.gov</u>>

Subject: [EXTERNAL] RE: Check in prior to check in

I am wondering about getting a new spreadsheet with allocations and dollar values. I haven't seen that yet with the final load submission yet.

Thanks,

April.

From: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov>

2

Sent: Wednesday, September 15, 2021 12:49 PM

To: April Owen aowen@popud.org
Subject: Check in prior to check in

CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

April- Do you have a few mins today. Want to have a quick chat before we check in tomorrow. I'm free all afternoon.

Thanks

Mike

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Pend Oreille County Public Utility District #1

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	116.349	Gross Requirements 7/
NLSL Resources 2/	82.401	New Resources 8/
Existing Resources 3/	26.052	Net Requirements (NR) 9/
Gross Requirements 4/	7.896	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	
		Notes:
Headroom 6/	<u>16.685</u>	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Re
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amount gre
approved by BPA (or BPA forecast i		the customer's Above-RHWM Load, then the
submitted forecast deemed not reasonable.)		to determine the order of resource removal/
2/ If NLSL see page 3 for additional calculations.		per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exhibit A and do		9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs. Existing Resources		less New Resources.
can be removed in the second year		10/ T2 Amounts based on customer's electio
See page 3 for removal of Existing F		September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimi	•	If T2 Amounts, then amounts go into section
Net Requirement calculation (prelin	,	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Abov	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process C	• •	
published on September 28, 2012,	with updates	
for Provisional HWM if necessary.		
6/ Headroom, if RHWM is greater t	.,	
Above-RHWM Load, if RHWM is les	s than Gross Req.	

Monthly Net Requirement Calculations (with Block Amounts)

Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	
Step 4: Monthly Tier 1 Block Amount Calculations				
Monthly Block Shaping Factors	0.034	0.149	0.135	
Monthly T1 Block Amounts (MWh)	2,352	10,306	9,337	
Monthly T2 Block Amounts (MWh)	0	0	0	
	13/ Exhibit C, Section 1.2.1.4 states that monthly Tier 1 Block amou			
	Shaping Factors are in	Exhibit C, Section 1.2.	13	
Diurnal Shaping Factors				
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	
· •	14/ Diurnal Shaping I	actors per Exhibit C, Se	ection 1.2.2.4 if custom	

Total - T1 Block Amounts (MW/hr)	3.0	14.0	13.0
HLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0
LLH - T1 Block Amounts (MW/hr)	3.0	14.0	13.0
	15/ Shaped within-month Block Amounts arre megawatt per hour		
	and rounded to a whole number. Flat within-month Block Amounts		
	rounded to a whole n	umber. The diurnal am	ounts go into section :
Tier 1 and Tier 2 Block Amounts (MWh)	2,232	10,094	9,672

Step 5: Net Requirement Calculations (and Unsp	ecified Resources Amounts)	
TRL Forecast Energy (MWh) TRL Forecast Peak (MW)	22,160 132.6	30,234 149.7	37,197 157.1
NLSL Resources (MWh) Existing Resources (MWh)	0 72,838	0 52,813	0 68,195
Monthly Gross Requirements (MWh)	-50,678 16/ TRL Forecast subm	-22,579	-30,998
	Existing Resources from	•	
New Specified Resources (MWh)	0	0	0
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0	0.000	0.000 0
Unspecified Resource Amts (MWH)	0.000	0.000	0.000
	17/ New Specified Res then customer may do		
Net Requirement Forecast (MWh)	(50,678) 18/ Net Requirements	(22,579) s equals TRL less NLSLs	(30,998) , Existing Resources, N

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	0	0
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-41,372	-42,751
Updated Resources Serving NLSL (MWh)	0	0	0
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoui
Change to Existing Resources (MWh)	42,751	41,372	46,092
Change to Existing Resources (aMW)	57.461	57.381	61.952
Updated Total Existing Resources (MWh)	72,838	52,813	68,195
Updated Total Existing Resources (aMW)	97.901	73.250	91.660
	19/ If customer has a	single resource split ar	mongst NLSL and non-N

Removal of Existing Resources in Second Year of Rate Period (if applicable)

Prepared by BPA, July 28, 2021

1st Year = 0, Second Year = 1

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ar	2021	202	1 2021
Prepared by BPA, July 28, 2021		10	1	1 12
RHWM	24.581	416	40	0 416
		328	32	1 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	30,234	37,197
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	0	0
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

Prepared by BPA, July 28, 2021

HLH by Month LLH by Month RHWM T1 System Capability HLH (MWh)	October 416 328 2,920,790	November 400 321 3,537,945	December 416 328 3,223,873	
RHWM T1 System Capability LLH (MWh)	1,633,134	2,227,488	2,419,335	
BP-22 Final Proposal Rates				
Composite Rate (TOCA) (\$\$/%)	\$1,998,417	\$1,998,417	\$1,998,417	
Non-Slice Rate (\$\$/%)	(\$329,943)	(\$329,943)	(\$329,943)	
Slice Rate (\$\$/%)	\$0	\$0	\$0	
Load Shaping - HLH (\$\$/MWh)	\$29.92	\$31.71	\$38.76	
Load Shaping - LLH (\$\$/MWh)	\$28.27	\$29.14	\$32.05	
Financial Reserves Policy Surcharge	\$0.00	\$0.00	\$0.00	
Financial Reserves Policy Amount	\$0.0	\$-Millions		
Financial Reserves Policy Surcharge	\$0.00			
FY2022 Billing Determinants				
TOCA %	0.11721%	0.11721%	0.11721%	
Non-Slice TOCA %	0.11721%	0.11721%	0.11721%	
Load Shaping - HLH (MWh)	-2,175	1,453	1,629	
Load Shaping - LLH (MWh)	-930	1,883	1,428	
FY2022 Tier 1 Power Charges without Low Density Discounts or Irrigation Rate Discounts				

Composite Charge	\$234,234	\$234,234	\$234,234
Non-Slice Charge	(\$38,673)	(\$38,673)	(\$38,673)
Load Shaping - HLH	(\$65,090)	\$46,080	\$63,152
Load Shaping - LLH	(\$26,297)	\$54,875	\$45,777
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$104,174	\$296,516	\$304,490
Steps in calculating Load Shaping Billing Determ	<u>ninants</u>		
System Shaped Load HLH (MWh)	3,423	4,147	3,779
System Shaped Load LLH (MWh)	1,914	2,611	2,836
Actual Tier 1 Load HLH (MWh)	1,248	5,600	5,408
Actual Tier 1 Load LLH (MWh)	984	4,494	4,264

on		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
7.896		Tier 2 Block Amounts		0.000	
0.000		Tier 1 Block Amounts	11/	7.896	
7.896	-	Net Requirements	11/	7.896	
7.830	:	Net Requirements		7.830	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
ess T2		Non-Slice TOCA		0.11721%	
ources and		TOCA		0.11721%	
ater than					
customer needs		Notes:			
Γ2 remarketing		11/ Tier 1 Block Amount	ts equal Net Requirer	ment less Tier 2 Amour	nts.
Contract.		Annual Tier 1 Block Amo	ounts (in aMW) go in	to section 1.1 of Exhibi	t C.
ent Amounts		12/ TOCA equals minim	um of Net Requireme	ent or RHWM,	
		divided by the Sum of R	HWM. Sum of RHWI	M in cell J18.	
made by the		Non-Slice TOCA equals	TOCA.		
2.5 of Exhibit C.					
irements.					
January	February	March	April	May	June
711	672	743	720	744	720
744					
744					
0.190	0.168	0.159	0.010	0.000	0.000
	0.168 11,620	0.159 10,997	0.010 692	0.000 0	0.000 0

N/A

N/A

N/A

N/A

N/A

N/A

18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0
18.0	17.0	15.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculatec

13,392 11,424 11,145 720

99,093	86,780	91,146	102,382	101,336	96,861
200.4	190.8	183.8	175.8	171.9	159.6
63,240	57,120	63,155	79,200	81,840	79,200
3,073	2,574	0	3,802	8,002	6,729
32,780	27,086	27,991	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 27,991 19,380 11,494 10,932

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

I	Revised: No Oct-Dec L	.oad, Jan-Sep Mill on	full, Crypto starts in	April with full ramp	
January	February	March	April	May	June
63,240	57,120	63,155	79,200	81,840	79,200
42,751	38,614	42,751	41,372	42,751	41,372
20,489	18,506	20,404	37,828	39,089	37,828
63,240	57,120	63,155	79,200	81,840	79,200
rces in Exhibit A to mat	ch NLSL forecast.				
-8,158	-4,344	-20,404	-29,566	-34,850	-31,355
-10.965	-6.464	-27.462	-41.064	-46.841	-43.549
3,073	2,574	0	3,802	8,002	6,729
4.130	3.830	0.000	5.281	10.755	9.346
NLSL load, then balance	the single resource am	ounts to match the NLS	L forecast keeping the	total dedicated amou	unts the same.

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022	2022	2022	2022	2022	2022
1	2	3	4	5	6
400	384	432	416	400	416
344	288	311	304	344	304
99,093 200.391 63,240 11,231 0 42,751 0.190 0.538 0.441	86,780 190.756 57,120 6,918 0 38,614 0.168 0.571	91,146 183.772 63,155 7,040 0 42,751 0.159 0.581 0.440	102,382 175.781 79,200 33,368 0 41,372 0.010 0.578 0.422	101,336 171.924 81,840 42,852 0 42,751 0.000 0.538 0.462	96,861 159.600 79,200 38,084 0 41,372 0.000 0.578 0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January	February	March	April	May	June
400	384	432	416	400	416
344	288	311	304	344	304
2,651,580	2,346,690	2,961,839	2,307,314	3,495,710	3,952,933
2,009,470	1,693,144	1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.11721%	0.11721%	0.11721%	0.11721%	0.11721%	0.11721%
0.11721%	0.11721%	0.11721%	0.11721%	0.11721%	0.11721%
4,092	3,777	3,008	-2,288	-4,097	-4,633
3,837	2,911	2,484	-1,380	-1,983	-1,864

\$234,234	\$234,234	\$234,234	\$234,234	\$234,234	\$234,234
(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)	(\$38,673)
\$140,318	\$131,417	\$82,942	(\$47,393)	(\$66,704)	(\$79,460)
\$99,179	\$82,365	\$70,640	(\$35,416)	(\$32,325)	(\$19,794)
\$0	\$0	\$0	\$0	\$0	\$0
\$435,058	\$409,343	\$349,143	\$112,752	\$96,532	\$96,307
3 108	2 751	3 472	2 704	4 097	4 633
3,108 2,355	2,751 1 985	3,472 2.181	2,704 1,684	4,097 1 983	4,633 1 864
2,355	1,985	2,181	1,684	1,983	1,864
,	,	,	,	,	,

PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
2,628	2,697	5,395	69,166	7.896
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
1-month shape.				

4.0	4.0	7.0	69,671	7.953
4.0	4.0	7.0		
4.0	4.0	7.0		
hours in the month, inth, I in cell O50.				
2,976	2,976	5,040	69,671	7.953

118,484 161.8	118,223 156.7	115,319 163.8	1,019,214 N/A	116.349 N/A
100,440	100,440	97,200	721,835	82.401
3,668 14,376	3,477 14,306	3,046 15,073	228,217 69,162	26.052 7.896
or additional calculati quirements.	ons.			
			•	
0 0.000	0 0.000	0 0.000	0	0.000
0.000	0 0.000	0 0.000	0	0.000
l,	0.000	0.000		
its will be added.				
14,376	14,306	15,073	69,162	7.896

July	August	September	ANNUAL	aMW
100,440	100,440	97,200	721,835	82.401
42,751	42,751	41,372	503,359	57.461
57,689	57,689	55,828	218,476	24.940
100,440	100,440	97,200	721,835	82.401
10.615	10 575	11 202	47.045	F 472
-19,615	-18,575	-11,293	-47,945	-5.473
-26.364	-24.966	-15.685		
3,668	3,477	3,046	228,217	26.052
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	202 40 32	9 Annual 0	aMW
118,484 161.786 100,440 23,283 0 42,751 0.038 0.538 0.441	118,223 156.652 100,440 22,052 0 42,751 0.039 0.581 0.441	115,319 163.785 97,200 14,339 0 41,372 0.078 0.556 0.444	1,019,214 721,835 262,798 0 503,359 1.000	116.349 82.401 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.11721% 0.11721% -2,509 -684	0.11721% 0.11721% -2,287 -699	0.11721% 0.11721% -716 247		

\$234,234	\$234,234	\$234,234	\$2,810,808	
(\$38,673)	(\$38,673)	(\$38,673)	(\$464,076)	
(\$92,392)	(\$82,026)	(\$20,153)	\$10,691	
(\$14,612)	(\$18,763)	\$7,146	\$212,775	
\$0	\$0	\$0	\$0	
\$88,557	\$94,772	\$182,554	\$2,570,198	
4,109	4,015	3,516	43,753	9
2,060	1,947	1,993	25,413	7
1,600	1,728	2,800	39,008	8
1,376	1,248	2,240	30,663	8

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cald	culation	Step 2: Annual Net Requirement Calcula
(in annual aMW)		(in annual aMW)
TRL Forecast 1/	105.281	Gross Requirements 7/
NLSL Resources 2/	71.333	New Resources 8/
Existing Resources 3/	27.594	Net Requirements (NR) 9/
Gross Requirements 4/	6.354	
		Tier 2 Block Amounts 10/
RHWM 5/	24.581	·
		Notes:
Headroom 6/	18.227	7/ Gross Requirements from Step 1.
		8/ New Resources equal Above-RHWM Load
Notes:		Amounts. If customer has New Specified Res
1/ TRL Forecast submitted by custor	mer and	T2 Block Amounts that sum to an amount gro
approved by BPA (or BPA forecast if	customer	the customer's Above-RHWM Load, then the
submitted forecast deemed not rea	sonable.)	to determine the order of resource removal/
2/ If NLSL see page 3 for additional		per section 10 of the body of the Slice/Block
3/ Existing Resources are from Exhi		9/ Net Requirements equals Gross Requiren
not include resources serving NLSLs	-	less New Resources.
can be removed in the second year		10/ T2 Amounts based on customer's electio
See page 3 for removal of Existing R		September 30, 2011 Notice Deadline.
4/ Gross Requirements is a prelimin	•	If T2 Amounts, then amounts go into section
Net Requirement calculation (prelin	•	T2 Amounts plus T1 Amounts equal Net Requ
since New Resources to serve Above	e-RHWM	
Load have not yet been added.)		
5/ RHWM is from RHWM Process O	• •	
published on September 28, 2012, v	with updates	
for Provisional HWM if necessary.	an Grass Bog	
6/ Headroom, if RHWM is greater the Above-RHWM Load, if RHWM is less		
Above-Kitivivi Load, II KH WW IS les	s tilali Gross Neq.	

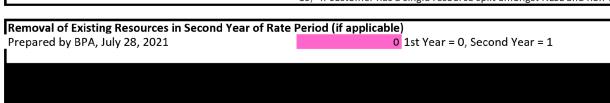
Monthly Net Requirement Calculations (with Block Amounts)

	October	November	December
Hours	744	721	744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	1,892	8,293	7,514
Monthly T2 Block Amounts (MWh)	0	0	0
	13/ Exhibit C, Section	n 1.2.1.4 states that mo	onthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custon

3.0	12.0	10.0
3.0	12.0	10.0
3.0	12.0	10.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within	-month Block Amounts
rounded to a whole no	umber. The diurnal an	nounts go into section :
2,232	8,652	7,440
	3.0 3.0 15/ Shaped within-mand rounded to a whole no	3.0 12.0 3.0 12.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal and

ecified Resources Amounts)				
22,160 132.6	44,654 149.7	52,077 157.1			
0 72.838	14,420 38.393	14,880 53,315			
-50,678	-8,159	-16,118			
Existing Resources from Exhibit A. Monthly Gross Requirements					
0	0	0			
0.000 0	0.000 0	0.000 0			
·					
(50,678)	(8,159)	(16,118)			
	22,160 132.6 0 72,838 -50,678 16/ TRL Forecast subm Existing Resources from 0 0.000 0 0.000 17/ New Specified Resources then customer may do	22,160			

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	14,420	14,880
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	-27,871
Updated Resources Serving NLSL (MWh)	0	14,420	14,880
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoui
Change to Existing Resources (MWh)	42,751	26,952	31,212
Change to Existing Resources (aMW)	57.461	37.381	41.952
Updated Total Existing Resources (MWh)	72,838	38,393	53,315
Updated Total Existing Resources (aMW)	97.901	53.250	71.660
	19/ If customer has a	single resource split a	mongst NLSL and non-N



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	202	1 2021
Prepared by BPA, July 28, 2021		10	1	.1 12
RHWM	24.581	416	40	0 416
		328	32	1 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	52,077
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	14,880
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	October 416 328 2,920,790 1,633,134	November 400 321 3,537,945 2,227,488	December 416 328 3,223,873 2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.00	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh) FY2022 Tier 1 Power Charges without Low Density Dis	0.09432% 0.09432% -1,507 -556	0.09432% 0.09432% 1,463 1,751	0.09432% 0.09432% 1,119 998

Composite Charge	\$188,491	\$188,491	\$188,491
Non-Slice Charge	(\$31,120)	(\$31,120)	(\$31,120)
Load Shaping - HLH	(\$45,086)	\$46,392	\$43,382
Load Shaping - LLH	(\$15,729)	\$51,025	\$31,989
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$96,556	\$254,788	\$232,742
Steps in calculating Load Shaping Billing Determinants			
Steps in calculating Load Shaping Billing Determinants System Shaped Load HLH (MWh)	2,755	3,337	3,041
	2,755 1,540	3,337 2,101	3,041 2,282
System Shaped Load HLH (MWh)	•	,	,

tion		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)			
6.354 0.000 6.354		Tier 2 Block Amounts Tier 1 Block Amounts Net Requirements		0.000 6.354 6.354	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
less T2 ources and		Non-Slice TOCA TOCA		0.09432% 0.09432%	
ater than		TOCA		0.0343270	
customer needs		Notes:			
2 remarketing Contract.		11/ Tier 1 Block Amoun Annual Tier 1 Block Am			
ent Amounts		12/ TOCA equals minim			
. manda bu tha		divided by the Sum of F		M in cell J18.	
n made by the		Non-Slice TOCA equals	TOCA.		
2.5 of Exhibit C.					
irements.					
January	February	March	April	May	June
January 744	February 672	March 743	April 720	May 744	June 720
744	672	743	720	744	720
0.190	0.168	0.159	0.010	0.000	720 0.000
0.190 10,575	0.168 9,351	743 0.159 8,850	0.010 557	0.000 0	720 0.000 0
0.190 10,575 0	0.168 9,351 0	0.159	0.010 557 0	0.000 0 0	0.000 0 0
0.190 10,575 0	0.168 9,351 0	0.159 8,850 0	0.010 557 0	0.000 0 0	0.000 0 0

14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0
14.0	14.0	12.0	1.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

10,416 9,408 8,916 720 0

50,733	96,860	102,291	95,182	93,896	89,661
200.4	190.8	183.8	175.8	171.9	159.6
14,880	67,200	74,300	72,000	74,400	72,000
39,102	2,574	2,846	3,802	11,203	7,456
-3,249	27,086	25,145	19,380	8,293	10,205

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

(3,249) 27,086 25,145 19,380 8,293 10,205

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct Lo	oad, Mill starts in Fe	b, Crypto flat at 20 N	1W starting Nov	
January	February	March	April	May	June
14,880	67,200	74,300	72,000	74,400	72,000
42,751	38,614	42,751	41,372	42,751	41,372
-27,871	28,586	31,549	30,628	31,649	30,628
14,880	67,200	74,300	72,000	74,400	72,000
rces in Exhibit A to mat	ch NLSL forecast.				
27,871	-4,344	-4,194	-29,566	-31,649	-30,628
37.461	-6.464	-5.645	-41.064	-42.539	-42.539
39,102	2,574	2,846	3,802	11,203	7,456
52.556	3.830	3.830	5.281	15.058	10.356
NLSL load, then balance	e the single resource amo	ounts to match the NLS	SL forecast keeping the	total dedicated amou	ınts the same.

26980092 BPA-2022-00699-F 0836

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

	2022	2022	2022	2022	2022	2022
	1 400	2 384	3 432	4 416	5 400	6 416
	344	288	311	304	344	304
	50,733	96,860	102,291	95,182	93,896	89,661
	200.391	190.756	183.772	175.781	171.924	159.600
	14,880 11,231	67,200 6,918	74,300	72,000 33,368	74,400 42,852	72,000 38,084
	0	0,918	7,040 0	0	0	0
	42,751	38,614	42,751	41,372	42,751	41,372
	0.190 0.538	0.168 0.571	0.159 0.581	0.010 0.578	0.000 0.538	0.000 0.578
	0.441	0.425	0.440	0.422	0.462	0.422
	0.037	0.020	0.019	0.133	0.173	0.154
	0.000	0.000	0.000	0.000	0.000	0.000
	la moon moo	F-h	N 4 a wala	A! I	N.4	luma
	January 400	February 384	March 432	April 416	May 400	June 416
	344	288	311	304	344	304
	2,651,580	2,346,690	2,961,839	2,307,314	3,495,710	3,952,933
	2,009,470	1,693,144	1,860,906	1,436,906	1,691,935	1,590,174
-						
	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
	\$0 \$34.29	\$0 \$34.79	\$0 \$27.57	\$0 \$20.71	\$0 \$16.28	\$0 \$17.15
	\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%	0.09432%
	3,099 2,921	3,163 2,435	2,390 1,977	-1,760 -1,051	-3,297 -1,596	-3,728 -1,500
	2,321	2,433	1,377	1,031	1,550	1,500

\$188,491	\$188,491	\$188,491	\$188,491	\$188,491	\$188,491
(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)	(\$31,120)
\$106,266	\$110,027	\$65,903	(\$36,455)	(\$53,678)	(\$63,942)
\$75,499	\$68,887	\$56,220	(\$26,976)	(\$26,012)	(\$15,928)
\$0	\$0	\$0	\$0	\$0	\$0
\$339,136	\$336,285	\$279,494	\$93,940	\$77,681	\$77,501
2,501					
	2 2 2 2	2 704	2 170	2 207	2 720
,	2,213	2,794	2,176	3,297	3,728
1,895	2,213 1,597	2,794 1,755	2,176 1,355	3,297 1,596	3,728 1,500
,	,	,	,	,	,

PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
2,115	2,171	4,341	55,658	6.354
0	0	0	0	0.000
N1 / A	5175	N1/A		
N/A	N/A	N/A		
N/A	N/A	N/A		
า-month shape.				

3.0	3.0	6.0	56,568	6.458
3.0	3.0	6.0		
3.0 hours in the month, inth, I in cell O50.	3.0	6.0		
2,232	2,232	4,320	56,568	6.458

92,444 161.8	92,183 156.7	90,119 163.8	922,259 N/A	105.281 N/A
74,400 3,668	74,400 3,477	72,000 3,046	624,880 241,720	71.333 27.594
14,376 or additional calculati	14,306	15,073	55,659	6.354
quirements.				
0	0	0	0	0.000
0.000 0	0.000 0	0.000 0	0	0.000
0.000 I,	0.000	0.000		
its will be added.				
14,376	14,306	15,073	55,659	6.354

July 74.400	August 74,400	September 72,000	ANNUAL 624,880	aMW 71.333
74,400	74,400	72,000	624,880	/1.333
42,751	42,751	41,372	503,359	57.461
31,649	31,649	30,628	121,521	13.872
74,400	74,400	72,000	624,880	71.333
-19,615	-18,575	-11,293	-21,078	-2.406
-26.364	-24.966	-15.685		
3,668	3,477	3,046	241,720	27.594
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	202 40 32	9 Annual 0	aMW
92,444 161.786 74,400 23,283 0 42,751 0.038 0.538 0.441	92,183 156.652 74,400 22,052 0 42,751 0.039 0.581 0.441	90,119 163.785 72,000 14,339 0 41,372 0.078 0.556 0.444	922,259 624,880 262,798 0 503,359 1.000	105.281 71.333 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.09432% 0.09432% -2,106 -626	0.09432% 0.09432% -1,935 -631	0.09432% 0.09432% -429 316		

\$188,491	\$188,491	\$188,491	\$2,261,892	
(\$31,120)	(\$31,120)	(\$31,120)	(\$373,440)	
(\$77,573)	(\$69,398)	(\$12,085)	\$13,753	
(\$13,366)	(\$16,932)	\$9,151	\$177,828	
\$0	\$0	\$0	\$0	
\$66,432	\$71,041	\$154,437	\$2,080,033	
3,306	3,231	2,829	35,209	7
1,658	1,567	1,604	20,450	5
1,200	1,296	2,400	31,680	6
1,032	936	1,920	24,888	6

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula		
(in annual aMW)		(in annual aMW)		
TRL Forecast 1/	145.895	Gross Requirements 7/		
NLSL Resources 2/	111.947	New Resources 8/		
Existing Resources 3/	17.315	Net Requirements (NR) 9/		
Gross Requirements 4/	16.633			
		Tier 2 Block Amounts 10/		
RHWM 5/	24.581			
		Notes:		
Headroom 6/	7.948	7/ Gross Requirements from Step 1.		
		8/ New Resources equal Above-RHWM Load		
Notes:		Amounts. If customer has New Specified Res		
1/ TRL Forecast submitted by custo	omer and	T2 Block Amounts that sum to an amount gro		
approved by BPA (or BPA forecast i	if customer	the customer's Above-RHWM Load, then the		
submitted forecast deemed not rea	asonable.)	to determine the order of resource removal/		
2/ If NLSL see page 3 for additiona	l calculations.	per section 10 of the body of the Slice/Block		
3/ Existing Resources are from Exh	libit A and do	9/ Net Requirements equals Gross Requirer		
not include resources serving NLSLs	s. Existing Resources	less New Resources.		
can be removed in the second year	of a Rate Period.	10/T2 Amounts based on customer's electio		
See page 3 for removal of Existing I	Resource calculations.	September 30, 2011 Notice Deadline.		
4/ Gross Requirements is a prelimi	inary	If T2 Amounts, then amounts go into section		
Net Requirement calculation (preli	minary	T2 Amounts plus T1 Amounts equal Net Requ		
since New Resources to serve Abov	re-RHWM			
Load have not yet been added.)				
5/ RHWM is from RHWM Process 0	Outputs spreadsheet			
published on September 28, 2012,	with updates			
for Provisional HWM if necessary.				
6/ Headroom, if RHWM is greater t	han Gross Req,			
Above-RHWM Load, if RHWM is les	ss than Gross Req.			

Monthly Net Requirement Calculations (with Block Amounts)

Hours	October 744	November 721	December 744
Step 4: Monthly Tier 1 Block Amount Calculations			
Monthly Block Shaping Factors	0.034	0.149	0.135
Monthly T1 Block Amounts (MWh)	4,954	21,710	19,670
Monthly T2 Block Amounts (MWh)	0	0	0
, , , ,	13/ Exhibit C, Section	n 1.2.1.4 states that mo	onthly Tier 1 Block amo
	Shaping Factors are in	n Exhibit C, Section 1.2.	13
Diurnal Shaping Factors			
Monthly Block HLH Shaping Factors	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A
l ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom

7.0	30.0	26.0
7.0	30.0	26.0
7.0	30.0	26.0
15/ Shaped within-mo	onth Block Amounts ar	re megawatt per hour
and rounded to a who	le number. Flat within-	-month Block Amounts
rounded to a whole nu	ımber. The diurnal am	ounts go into section :
5,208	21,630	19,344
	7.0 7.0 15/ Shaped within-moand rounded to a whole number of the state	7.0 30.0 7.0 30.0 15/ Shaped within-month Block Amounts ar and rounded to a whole number. Flat within rounded to a whole number. The diurnal am

TRL Forecast Energy (MWh)	22,160	44,654	115,317
TRL Forecast Peak (MW)	132.6	149.7	157.1
NLSL Resources (MWh)	0	14,420	78,120
Existing Resources (MWh)	72,838	38,393	3,234
Monthly Gross Requirements (MWh)	-50,678	-8,159	33,963
	16/ TRL Forecast subn	nitted by customer and	approved by BPA (or
	Existing Resources fro	m Exhibit A. Monthly (Gross Requirements e
			·
New Specified Resources (MWh)	0	0	0
, , ,	0 0.000	0	0.000
New Specified Resources (aMW)			-
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000	0.000	0.000
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (aMW) Unspecified Resource Amts (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000	0.000 0 0.000 o serve Above-RHWM
New Specified Resources (MWh) New Specified Resources (aMW) Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW) Net Requirement Forecast (MWh)	0.000 0 0.000 17/ New Specified Re	0.000 0 0.000 souces can be added to	0.000 0 0.000 o serve Above-RH

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021			
	October	November	December
NLSL Forecast (MWh)	0	14,420	78,120
Resources Serving an NLSL (MWh)	42,751	41,372	42,751
Change to NLSL Resources (MWh)	-42,751	-26,952	35,369
Updated Resources Serving NLSL (MWh)	O	14,420	78,120
	18/ Original resource	amounts from Exhibit	A. Update NLSL resoui
Change to Existing Resources (MWh)	42,751	26,952	-18,869
Change to Existing Resources (aMW)	57.461	37.381	-25.362
Updated Total Existing Resources (MWh)	72,838	38,393	3,234
Updated Total Existing Resources (aMW)	97.901	53.250	4.347
	19/ If customer has a	single resource split a	mongst NLSL and non-N

Removal of Existing Resources in Second Year of Rate	Period (if applicable)
Prepared by BPA, July 28, 2021	0 1st Year = 0, Second Year = 1

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Ye	ear	2021	202	1 2021
Prepared by BPA, July 28, 2021		10	1	.1 12
RHWM	24.581	416	40	0 416
		328	32	1 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	44,654	115,317
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	14,420	78,120
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328
RHWM T1 System Capability HLH (MWh)	2,920,790	3,537,945	3,223,873
RHWM T1 System Capability LLH (MWh)	1,633,134	2,227,488	2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh) FY2022 Tier 1 Power Charges without Low Density Disco	0.24691%	0.24691%	0.24691%
	0.24691%	0.24691%	0.24691%
	-4,300	3,264	2,856
	-1,736	4,130	2,554

Composite Charge	\$493,429	\$493,429	\$493,429
Non-Slice Charge	(\$81,466)	(\$81,466)	(\$81,466)
Load Shaping - HLH	(\$128,648)	\$103,516	\$110,696
Load Shaping - LLH	(\$49,087)	\$120,351	\$81,869
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$234,228	\$635,830	\$604,528
Steps in calculating Load Shaping Billing Determinants			
Steps in calculating Load Shaping Billing Determinants System Shaped Load HLH (MWh)	7,212	8,736	7,960
	7,212 4,032	8,736 5,500	7,960 5,974
System Shaped Load HLH (MWh)	•	,	,

tion		Step 3: Critical Slice (in annual aMW)	& Block Amounts (\	with TOCAs)	
16.633		Tier 2 Block Amounts	,	0.000	
0.000		Tier 1 Block Amounts		16.633	
16.633	-	Net Requirements	, 11/	16.633	
10.033	=	Net Nequilements		10.033	
0.000		TOCAs 12/			
		Sum of RHWM		6736.361	
ess T2		Non-Slice TOCA		0.24691%	
ources and		TOCA		0.24691%	
eater than					
customer needs		Notes:			
T2 remarketing Contract.		11/ Tier 1 Block Amoun			
ent Amounts		Annual Tier 1 Block Am 12/ TOCA equals minim			ι
ent Amounts		divided by the Sum of F	•		
n made by the		Non-Slice TOCA equals			
2.5 of Exhibit C.					
irements.					
January 744	February 672	March 743	April 720	May 744	June 720
0.190	0.168	0.159	0.010	0.000	0.000
27,684	24,478	23,167	1,457	0	0
0	0	0	0	0	0
nts in MWh are equal	to the Monthly Shap	ing Factors * Annual Tier 1	Block Amounts in all	1W (see Step 3) * Hour	s in Fiscal Year
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	NI/A

37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0
37.0	36.0	31.0	2.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

27,528 24,192 23,033 1,440 0

113,973	100,220	134,983	126,862	126,632	121,341
200.4	190.8	183.8	175.8	171.9	159.6
78,120	70,560	106,992	103,680	107,136	103,680
3,073	2,574	2,846	3,802	8,002	6,729
32,780	27,086	25,145	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 25,145 19,380 11,494 10,932

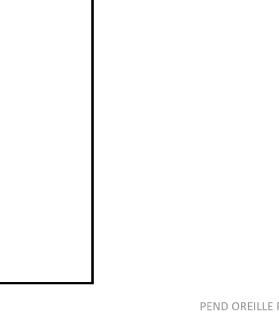
ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

	Revised: No Oct Lo	oad, Mill starts in Dec	cember, Crypto ramp	up starting Nov	
January	February	March	April	May	June
78,120	70,560	106,992	103,680	107,136	103,680
42,751	38,614	42,751	41,372	42,751	41,372
35,369	31,946	64,241	62,308	64,385	62,308
78,120	70,560	106,992	103,680	107,136	103,680
rces in Exhibit A to ma	tch NLSL forecast.				
-8,158	-4,344	-4,194	-29,566	-34,850	-31,355
-10.965	-6.464	-5.645	-41.064	-46.841	-43.549
3,073	2,574	2,846	3,802	8,002	6,729
4.130	3.830	3.830	5.281	10.755	9.346
VISI load, then balance	e the single resource am	ounts to match the NIS	SI forecast keeping the	total dedicated amou	ints the same.

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022	2022	2022	2022	2022	2022
1	2	3	4	5	6
400	384	432	416	400	416
344	288	311	304	344	304
113,973	100,220	134,983	126,862	126,632	121,341
200.391	190.756	183.772	175.781	171.924	159.600
78,120	70,560	106,992	103,680	107,136	103,680
11,231 0	6,918 0	7,040 0	33,368 0	42,852 0	38,084 0
42,751	38,614	42,751	41,372	42,751	41,372
0.190	0.168	0.159	0.010	0.000	0.000
0.538	0.571	0.581	0.578	0.538	0.578
0.441	0.425	0.440	0.422	0.462	0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January	February	March	April	May	June
400	384	432	416	400	416
344	288	311	304	344	304
2,651,580	2,346,690	2,961,839	2,307,314	3,495,710	3,952,933
2,009,470	1,693,144	1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0	\$0	\$0	\$0	\$0	\$0
\$34.29	\$34.79	\$27.57	\$20.71	\$16.28	\$17.15
\$25.85 \$0.00	\$28.29 \$0.00	\$28.44 \$0.00	\$25.66 \$0.00	\$16.30 \$0.00	\$10.62 \$0.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
0.24691%	0.24691%	0.24691%	0.24691%	0.24691%	0.24691%
8,253	8,030	6,079	-4,865	-8,631	-9,760
7,766	6,187	5,046	-2,940	-4,178	-3,926

\$493,429	\$493,429	\$493,429	\$493,429	\$493,429	\$493,429
(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)	(\$81,466)
\$282,995	\$279,356	\$167,596	(\$100,754)	(\$140,517)	(\$167,387)
\$200,762	\$175,043	\$143,515	(\$75,437)	(\$68,094)	(\$41,697)
\$0	\$0	\$0	\$0	\$0	\$0
\$895,720	\$866,362	\$723,074	\$235,772	\$203,352	\$202,879
	·				
6,547	5,794	7,313	5,697	8,631	9,760
	5,794 4,181	7,313 4,595	5,697 3,548	8,631 4,178	9,760 3,926
6,547	,	,	•	,	,



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
5,537	5,682	11,365	145,704	16.633
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.	//	. 7		

7.0	8.0	16.0	145,055	16.559
7.0	8.0	16.0		
7.0	8.0	16.0		
hours in the month, inth, I in cell O50.				
5,208	5,952	11,520	145,055	16.559

125,180 161.8	124,919 156.7	121,799 163.8	1,278,039 N/A	145.895 N/A
107,136 3,668 14,376	107,136 3,477 14,306	103,680 3,046 15,073	980,660 151,682 145,697	111.947 17.315 16.633
or additional calculat quirements.	ions.			
0 0.000	0 0.000	0 0.000	0	0.000
0 0.000 I, its will be added.	0 0.000	0 0.000	0	0.000
14,376	14,306	15,073	145,697	16.633

July	August	September	ANNUAL	aMW
107,136	107,136	103,680	980,660	111.947
42,751	42,751	41,372	503,359	57.461
64,385	64,385	62,308	477,301	54.486
107,136	107,136	103,680	980,660	111.947
-19,615	-18,575	-11,293	-111,116	-12.684
-26.364	-24.966	-15.685		
3,668	3,477	3,046	151,682	17.315
4.930	4.673	4.231		



2022 7 400 344	2022 8 432 312	2022 9 400 320	9 Annual O	aMW
125,180 161.786 107,136 23,283 0 42,751 0.038 0.538 0.441	124,919 156.652 107,136 22,052 0 42,751 0.039 0.581 0.441	121,799 163.785 103,680 14,339 0 41,372 0.078 0.556 0.444	1,278,039 980,660 262,798 0 503,359 1.000	145.895 111.947 30.000 0.000 57.461
0.089 0.000	0.084 0.000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.24691% 0.24691% -5,855 -1,932	0.24691% 0.24691% -5,001 -1,605	0.24691% 0.24691% -1,007 921		

\$493,429	\$493,429	\$493,429	\$5,921,148	
(\$81,466)	(\$81,466)	(\$81,466)	(\$977,592)	
(\$215,641)	(\$179,397)	(\$28,334)	(\$16,519)	
(\$41,260)	(\$43,096)	\$26,671	\$429,540	
\$0	\$0	\$0	\$0	
\$155,062	\$189,470	\$410,300	\$5,356,577	
8,655	8,457	7,407	92,169	19
4,340	4,101	4,199	53,534	14
2,800	3,456	6,400	81,232	17
2,408	2,496	5,120	63,823	17

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cal	culation	Step 2: Annual Net Requirement Calcula		
(in annual aMW)		(in annual aMW)		
TRL Forecast 1/	152.891	Gross Requirements 7/		
NLSL Resources 2/	118.943	New Resources 8/		
Existing Resources 3/	13.264	Net Requirements (NR) 9/		
Gross Requirements 4/	20.684			
		Tier 2 Block Amounts 10/		
RHWM 5/	24.581			
		Notes:		
Headroom 6/	3.897	7/ Gross Requirements from Step 1.		
		8/ New Resources equal Above-RHWM Load		
Notes:		Amounts. If customer has New Specified Res		
1/ TRL Forecast submitted by customer and		T2 Block Amounts that sum to an amount gro		
approved by BPA (or BPA forecast i	f customer	the customer's Above-RHWM Load, then the		
submitted forecast deemed not reasonable.)		to determine the order of resource removal/		
2/ If NLSL see page 3 for additional calculations.		per section 10 of the body of the Slice/Block		
3/ Existing Resources are from Exhibit A and do		9/ Net Requirements equals Gross Require		
not include resources serving NLSLs. Existing Resources		less New Resources.		
can be removed in the second year of a Rate Period.		10/T2 Amounts based on customer's election		
See page 3 for removal of Existing F	Resource calculations.	September 30, 2011 Notice Deadline.		
4/ Gross Requirements is a prelimi	nary	If T2 Amounts, then amounts go into section		
Net Requirement calculation (prelim	minary	T2 Amounts plus T1 Amounts equal Net Requ		
since New Resources to serve Abov	e-RHWM			
Load have not yet been added.)				
5/ RHWM is from RHWM Process C	Outputs spreadsheet			
published on September 28, 2012,	with updates			
for Provisional HWM if necessary.				
6/ Headroom, if RHWM is greater t	han Gross Req,			
Above-RHWM Load, if RHWM is less than Gross Req.				

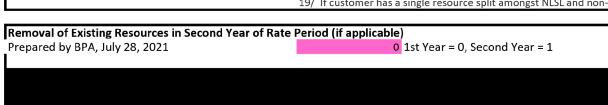
Monthly Net Requirement Calculations (with Block Amounts)

Hours	October 744	November 721	December 744	
Step 4: Monthly Tier 1 Block Amount Calculations				
Monthly Block Shaping Factors	0.034	0.149	0.135	
Monthly T1 Block Amounts (MWh)	6,160	26,997	24,461	
Monthly T2 Block Amounts (MWh)	0	0	0	
	13/ Exhibit C, Section 1.2.1.4 states that monthly Tier 1 Block amount			
	Shaping Factors are in Exhibit C, Section 1.2.13			
Diurnal Shaping Factors				
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	
	14/ Diurnal Shaping Factors per Exhibit C, Section 1.2.2.4 if custom			

Total - T1 Block Amounts (MW/hr)	8.0	37.0	33.0	
HLH - T1 Block Amounts (MW/hr)	8.0	37.0	33.0	
LLH - T1 Block Amounts (MW/hr)	8.0	37.0	33.0	
	15/ Shaped within-month Block Amounts arre megawatt per hour			
	and rounded to a whole number. Flat within-month Block Amounts			
	rounded to a whole number. The diurnal amounts go into section			
Tier 1 and Tier 2 Block Amounts (MWh)	5,952	26,677	24,552	

Step 5. Net Requirement Calculations (and Or	nspecified Resources Amounts)		
TRL Forecast Energy (MWh)	22,160	105,939	115,317	
TRL Forecast Peak (MW)	132.6	149.7	157.1	
NLSL Resources (MWh)	0	75,705	78,120	
Existing Resources (MWh)	72,838	2,905	3,234	
Monthly Gross Requirements (MWh)	-50,678	27,329	33,963	
	16/ TRL Forecast submitted by customer and approved by BPA (or I			
	Existing Resources from Exhibit A. Monthly Gross Requirements ec			
New Specified Resources (MWh)	0	0	0	
New Specified Resources (aMW)	0.000	0.000	0.000	
		_		
Unspecified Resource Amts (MWh)	0	0	0	
Unspecified Resource Amts (MWh) Unspecified Resource Amts (aMW)	0.000	0.000	0 0.000	
· · · · · · · · · · · · · · · · · · ·		0.000	0.000	
· · · · · · · · · · · · · · · · · · ·	0.000	0.000 souces can be added to	0.000 o serve Above-RHWM	
· · · · · · · · · · · · · · · · · · ·	0.000 17/ New Specified Res	0.000 souces can be added to	0.000 o serve Above-RHWM	

NLSL Calculations (if applicable) Prepared by BPA, July 28, 2021				
	October	November	December	
NLSL Forecast (MWh)	0	75,705	78,120	
Resources Serving an NLSL (MWh)	42,751	41,372	42,751	
Change to NLSL Resources (MWh)	-42,751	34,333	35,369	
Updated Resources Serving NLSL (MWh)	0	75,705	78,120	
	18/ Original resource amounts from Exhibit A. Update NLSL resour			
Change to Existing Resources (MWh)	42,751	-8,536	-18,869	
Change to Existing Resources (aMW)	57.461	-11.839	-25.362	
Updated Total Existing Resources (MWh)	72,838	2,905	3,234	
Updated Total Existing Resources (aMW)	97.901	4.029	4.347	
	19/ If customer has a single resource split amongst NLSL and non-l			



29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is appli that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's for

Customer Specific Data for Fiscal Yo	ear	2021	202	21 2021
Prepared by BPA, July 28, 2021		10		11 12
RHWM	24.581	416	40	00 416
		328	32	21 328
BES Number	10306			
T2 Block Amounts	0			
TRL Forecast - Energy (MWh)		22,160	105,939	115,317
TRL Forecast - Peak (MW)		132.585	149.663	157.084
NLSL Forecast		0	75,705	78,120
Existing		30,087	11,441	22,103
New		0	0	0
NLSL		42,751	41,372	42,751
Block Shaping Factors		0.034	0.149	0.135
HLH Shaping Factors		0.559	0.555	0.559
LLH Shaping Factors		0.419	0.445	0.462
Existing Resource Removal Shape		0.119	0.039	0.084
New Resource Removal Shape		0.000	0.000	0.000

Customer Charges and Load Shaping Charges

HLH by Month LLH by Month RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	October	November	December
	416	400	416
	328	321	328
	2,920,790	3,537,945	3,223,873
	1,633,134	2,227,488	2,419,335
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00
FY2022 Billing Determinants TOCA % Non-Slice TOCA % Load Shaping - HLH (MWh) Load Shaping - LLH (MWh) FY2022 Tier 1 Power Charges without Low Density Disc	0.30705%	0.30705%	0.30705%
	0.30705%	0.30705%	0.30705%
	-5,640	3,937	3,829
	-2,391	5,037	3,395

Composite Charge	\$613,614	\$613,614	\$613,614
Non-Slice Charge	(\$101,309)	(\$101,309)	(\$101,309)
Load Shaping - HLH	(\$168,757)	\$124,834	\$148,416
Load Shaping - LLH	(\$67,581)	\$146,793	\$108,824
Financial Reserves Policy Surcharge	\$0	\$0	\$0
Total	\$275,967	\$783,932	\$769,545
Steps in calculating Load Shaping Billing Determinants			
Steps in calculating Load Shaping Billing Determinants System Shaped Load HLH (MWh)	8,968	10,863	9,899
	8,968 5,015	10,863 6,840	9,899 7,429
System Shaped Load HLH (MWh)	,	,	,

ion		Step 3: Critical Slice & Block Amounts (with TOCAs) (in annual aMW)				
20.684		Tier 2 Block Amounts		0.000		
0.000	_	Tier 1 Block Amounts	s 11/	20.684		
20.684	=	Net Requirements		20.684		
0.000	l	TOCAs 12/				
		Sum of RHWM		6736.361		
ess T2		Non-Slice TOCA		0.30705%		
ources and		TOCA		0.30705%		
ater than customer needs		Notes:				
2 remarketing		11/ Tier 1 Block Amour	nts equal Net Require	ment less Tier 2 Amoui	nts.	
Contract.		Annual Tier 1 Block Am				
ent Amounts		12/ TOCA equals minim				
1.1.2		divided by the Sum of F		M in cell J18.		
made by the		Non-Slice TOCA equals	TOCA.			
2.5 of Exhibit C.						
irements.						
January	February	March	April	May	June	
744	672	743	720	744	720	
0.190	0.168	0.159	0.010	0.000	0.000	
34,426	30,440	28,809	1,812	0	0	
0	0	0	0	0	0	
nts in MWh are equal	to the Monthly Shap	ing Factors * Annual Tier 1	Block Amounts in al	ИW (see Step 3) * Houi	rs in Fiscal Year	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	NI/A	N/A	

46.0	45.0	39.0	3.0	0.0	0.0
46.0	45.0	39.0	3.0	0.0	0.0
46.0	45.0	39.0	3.0	0.0	0.0

amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C multiplied by the diurnal shaping factor, divided by the are megawatt per hour amounts equal to the monthly MWh amounts calculated per 1.2.14 of Exhibit C divided by the hours in the mc 1.3 of Exhibit C. Due to rounding the total megawatt-hours established in cell O55 will be different than the megawatt-hours calculated

34,224 30,240 28,977 2,160 0

113,973	100,220	134,983	126,862	126,632	121,341
200.4	190.8	183.8	175.8	171.9	159.6
78,120	70,560	106,992	103,680	107,136	103,680
3,073	2,574	2,846	3,802	8,002	6,729
32,780	27,086	25,145	19,380	11,494	10,932

BPA forecast if customer forecast not approved.) TRL Forecast (energy and peak) goes into section 1.1 of Exhibit A. If NLSL see page 3 f juals TRL less NLSLs and Exisiting Resources. Need to add New Resources if customer has Above-RHWM Load before calculating Net Re

0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000
0	0	0	0	0	0
0.000	0.000	0.000	0.000	0.000	0.000

Load. If customer must dedicate New Specified Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Loac h the Above-RHWM Load. If New Specified Resources were not added to serve Above-RHWM Load, then Unspecified Resource Amour

32,780 27,086 25,145 19,380 11,494 10,932

ew Resources (Specified and Unspecified), and plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

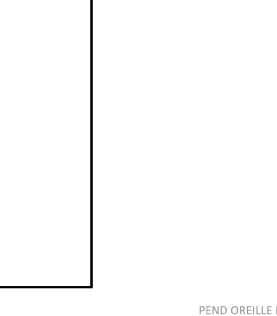
	Revised: No Oc	t Load, Mill starts in	Nov, Crypto ramp up	starting Nov	
January	February	March	April	May	June
78,120	70,560	106,992	103,680	107,136	103,680
42,751	38,614	42,751	41,372	42,751	41,372
35,369	31,946	64,241	62,308	64,385	62,308
78,120	70,560	106,992	103,680	107,136	103,680
rces in Exhibit A to ma	tch NLSL forecast.				
-8,158	-4,344	-4,194	-29,566	-34,850	-31,355
-10.965	-6.464	-5.645	-41.064	-46.841	-43.549
3,073	2,574	2,846	3,802	8,002	6,729
4.130	3.830	3.830	5.281	10.755	9.346
JUST load then balance	e the single resource am	ounts to match the NIS	I forecast keening the	total dedicated amou	ints the same

NLSL load, then balance the single resource amounts to match the NLSL forecast keeping the total dedicated amounts the same

cable for customers that have Existing Resources and have a Preliminary Net Requirement in the second year of a Rate Period ecast of Customer's Net Requirement for each Fiscal Year prior to the removal of any resources in accordance with section 10.

2022	2022	2022	2022	2022	2022
1 400	2 384	3 432	4 416	5 400	6 416
344	288	311	304	344	304
113,973	100,220	134,983	126,862	126,632	121,341
200.391	190.756	183.772	175.781	171.924	159.600
78,120	70,560	106,992	103,680	107,136	103,680
11,231	6,918	7,040	33,368	42,852	38,084
0 42,751	0 38,614	0 42,751	0 41,372	0 42,751	0 41,372
0.190	0.168	0.159	0.010	0.000	0.000
0.538	0.571	0.581	0.578	0.538	0.578
0.441	0.425	0.440	0.422	0.462	0.422
0.037	0.020	0.019	0.133	0.173	0.154
0.000	0.000	0.000	0.000	0.000	0.000
January	February	March	April	May	June
400	384	432	416	400	416
344	288	311	304	344	304
2,651,580	2,346,690	2,961,839	2,307,314	3,495,710	3,952,933
2,009,470	1,693,144	1,860,906	1,436,906	1,691,935	1,590,174
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)
\$0 \$34.29	\$0 \$34.79	\$0 \$27.57	\$0 \$20.71	\$0 \$16.28	\$0 \$17.15
\$25.85	\$28.29	\$28.44	\$25.66	\$16.30	\$10.62
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0.30705%	0.30705%	0.30705%	0.30705%	0.30705%	0.30705%
0.30705%	0.30705%	0.30705%	0.30705%	0.30705%	0.30705%
10,258	10,074	7,754	-5,837	-10,734	-12,137
9,654	7,761	6,415	-3,500	-5,195	-4,883

\$613,614	\$613,614	\$613,614	\$613,614	\$613,614	\$613,614
(\$101,309)	(\$101,309)	(\$101,309)	(\$101,309)	(\$101,309)	(\$101,309)
\$351,758	\$350,491	\$213,769	(\$120,876)	(\$174,743)	(\$208,158)
\$249,554	\$219,564	\$182,445	(\$89,811)	(\$84,680)	(\$51,854)
\$0	\$0	\$0	\$0	\$0	\$0
\$1,113,617	\$1,082,360	\$908,519	\$301,618	\$252,882	\$252,293
8,142	7,206	9,094	7,085	10,734	12,137
8,142 6,170	7,206 5,199	9,094 5,714	7,085 4,412	10,734 5,195	12,137 4,883
,	,	,	,	•	,



PEND OREILLE PUD, page 2

July	August	September	ANNUAL	aMW
744	744	720	8,760	
0.038	0.039	0.078	1.000	
6,885	7,066	14,133	181,191	20.684
0	0	0	0	0.000
N/A	N/A	N/A		
N/A	N/A	N/A		
n-month shape.				

9.0	9.0	20.0	180,574	20.613
9.0	9.0	20.0		
9.0	9.0	20.0		
hours in the month, inth, I in cell O50.				
6,696	6,696	14,400	180,574	20.613

125,180 161.8	124,919 156.7	121,799 163.8	1,339,324 N/A	152.891 N/A
107,136 3,668	107,136 3,477	103,680 3,046	1,041,945 116,194	118.943 13.264
14,376	14,306	15,073	181,185	20.684
or additional calculati quirements.	ons.			
0	0	0	0	0.000
0.000	0.000	0.000	U	0.000
0 0.000	0 0.000	0.000	0	0.000
l,	0.000	0.000		
its will be added.				
14,376	14,306	15,073	181,185	20.684

July	August	September	ANNUAL	aMW
107,136	107,136	103,680	1,041,945	118.943
42,751	42,751	41,372	503,359	57.461
64,385	64,385	62,308	538,586	61.482
107,136	107,136	103,680	1,041,945	118.943
-19,615	-18,575	-11,293	-146,604	-16.736
-26.364	-24.966	-15.685		
3,668	3,477	3,046	116,194	13.264
4.930	4.673	4.231		



	2022 7 400 344	2022 8 432 312	202 40 32	9 Annual 00	aMW
125,1 161.7 107,1 23,2 0 42,7 0.03 0.53 0.44	786 19 136 10 83 2 51 4 88 0	24,919 56.652 07,136 2,052 0 2,751 0.039 0.581	121,799 163.785 103,680 14,339 0 41,372 0.078 0.556 0.444	1,339,324 1,041,945 262,798 0 503,359 1.000	152.891 118.943 30.000 0.000 57.461
0.08).084).000	0.051 0.000	1.000	

PEND OREILLE PUD, page 4

July	August	September	ANNUAL	aMW
400	432	400	4912	
344	312	320	3848	
3,505,339	3,425,259	2,999,685	37,328,957	7,599.543
1,757,589	1,660,955	1,700,508	21,681,545	5,634.497
\$1,998,417 (\$329,943) \$0 \$36.83 \$21.36 \$0.00	\$1,998,417 (\$329,943) \$0 \$35.87 \$26.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$28.15 \$28.95 \$0.00		
0.30705% 0.30705% -7,163 -2,301	0.30705% 0.30705% -6,629 -2,292	0.30705% 0.30705% -1,211 1,179		

\$613,614	\$613,614	\$613,614	\$7,363,368	
(\$101,309)	(\$101,309)	(\$101,309)	(\$1,215,708)	
(\$263,819)	(\$237,791)	(\$34,077)	(\$18,953)	
(\$49,142)	(\$61,539)	\$34,120	\$536,693	
\$0	\$0	\$0	\$0	
\$199,344	\$212,975	\$512,348	\$6,665,400	
10,763	10,517	9,211	114,619	23
5,397	5,100	5,221	66,573	17
3,600	3,888	8,000	101,120	21
3,096	2,808	6,400	79,454	21

FY2022 Annual Net Requirement Calculations and Block Amounts

Prepared by BPA, July 28, 2021

Customer Name	PEND OREILLE PUD	
BES Number	10306	
Fiscal Year	2022	
Hours	8,760	

Step 1: Above-RHWM Load Cald (in annual aMW)	culation	Step 2: Annual Net Requirement C (in annual aMW)	Calculation
(m annuar aivivv)		(m annuar alvivi)	
TRL Forecast 1/	139.851	Gross Requirements 7/	26.544
NLSL Resources 2/	105.904	New Resources 8/	1.963
Existing Resources 3/	7.403	Net Requirements (NR) 9/	24.581
Gross Requirements 4/	26.544		
		Tier 2 Block Amounts 10/	0.000
RHWM 5/	24.581		
		Notes:	
Above-RHWM Load 6/	1.963	7/ Gross Requirements from Step 1.	
		8/ New Resources equal Above-RHWN	1 Load less T2
Notes:		Amounts. If customer has New Specifi	ied Resources and
1/ TRL Forecast submitted by custo	mer and	T2 Block Amounts that sum to an amo	unt greater than
approved by BPA (or BPA forecast it	fcustomer	the customer's Above-RHWM Load, th	en the customer needs
submitted forecast deemed not rea	sonable.)	to determine the order of resource rer	moval/T2 remarketing
2/ If NLSL see page 3 for additional	calculations.	per section 10 of the body of the Slice/	/Block Contract.
3/ Existing Resources are from Exhi	ibit A and do	9/ Net Requirements equals Gross Rec	quirement Amounts
not include resources serving NLSLs	. Existing Resources	less New Resources.	
can be removed in the second year	of a Rate Period.	10/ T2 Amounts based on customer's e	election made by the
See page 3 for removal of Existing R	Resource calculations.	September 30, 2011 Notice Deadline.	
4/ Gross Requirements is a prelimin	nary	If T2 Amounts, then amounts go into s	
Net Requirement calculation (prelin	ninary	T2 Amounts plus T1 Amounts equal Ne	et Requirements.
since New Resources to serve Abov	e-RHWM		
Load have not yet been added.)			
5/ RHWM is from RHWM Process O	• •		
published on September 28, 2012, v	with updates		
for Provisional HWM if necessary.			
6/ Headroom, if RHWM is greater th	nan Gross Req,		
Above-RHWM Load, if RHWM is les	s than Gross Reg.		

Monthly Net Requirement Calculations (with Block Amounts) Prepared by BPA, July 28, 2021

Hours	October 744	November 721	December 744	January 744	February 672
Step 4: Monthly Tier 1 Block Amount Calculati	ons				
Monthly Block Shaping Factors	0.034	0.149	0.135	0.190	0.168
Monthly T1 Block Amounts (MWh)	7,321	32,084	29,069	40,913	36,175
Monthly T2 Block Amounts (MWh)	0	0	0	0	0
		n 1.2.1.4 states that mo n Exhibit C, Section 1.2.	•	unts in MWh are equal	l to the Monthly Shapir
Diurnal Shaping Factors					
Monthly Block HLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
Monthly Block LLH Shaping Factors	N/A	N/A	N/A	N/A	N/A
	14/ Diurnal Shaping	Factors per Exhibit C, Se	ection 1.2.2.4 if custom	ier elected Tier 1 Block	within-month shaped
Total - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
HLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
LLH - T1 Block Amounts (MW/hr)	10.0	44.0	39.0	55.0	54.0
1		ole number. Flat within	-month Block Amounts	are megawatt per ho	
Tier 1 and Tier 2 Block Amounts (MWh)			-month Block Amounts	are megawatt per ho	ur amounts equal to th
	rounded to a whole r	ole number. Flat within number. The diurnal an 31,724	-month Block Amounts nounts go into section ?	are megawatt per hou 1.3 of Exhibit C. Due to	ur amounts equal to th o rounding the total me
Step 5: Net Requirement Calculations (and Uns	rounded to a whole r 7,440 specified Resources Amount 80,313	ole number. Flat within number. The diurnal am 31,724 (s)	-month Block Amounts nounts go into section 2 29,016	are megawatt per hot 1.3 of Exhibit C. Due to 40,920 121,605	ur amounts equal to the prounding the total measures 36,288
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6	ole number. Flat within number. The diurnal am 31,724 (s) 86,590 149.7	-month Block Amounts nounts go into section 2 29,016 95,350 157.1	are megawatt per hot 1.3 of Exhibit C. Due to 40,920 121,605 200.4	ur amounts equal to the prounding the total model and the second
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153	31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 5-month Block Amounts 29,016	121,605 200.4 85,752	ur amounts equal to the prounding the total model of the second of the total model of the second of
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685	31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042	121,605 200.4 85,752 3,073	107,113 190.8 77,453 2,574
Step 5: Net Requirement Calculations (and Uns	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub	31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or I	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom	ar amounts equal to the prounding the total med 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approve
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub	31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724 31,724	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or I	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom	ar amounts equal to the prounding the total med 36,288 107,113 190.8 77,453 2,574 27,086 er forecast not approve
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub Existing Resources from	as) 86,590 149.7 56,356 2,905 27,329 mitted by customer and om Exhibit A. Monthly	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or I	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom	107,113 190.8 77,453 2,574 27,086 er forecast not approved Exisiting Resources.
Step 5: Net Requirement Calculations (and Uns TRL Forecast Energy (MWh) TRL Forecast Peak (MW) NLSL Resources (MWh) Existing Resources (MWh) Monthly Gross Requirements (MWh) New Specified Resources (MWh)	rounded to a whole r 7,440 specified Resources Amount 80,313 132.6 58,153 14,685 7,475 16/ TRL Forecast sub Existing Resources from	as solve number. Flat within number. The diurnal am 31,724 886,590 149.7 56,356 2,905 27,329 mitted by customer and om Exhibit A. Monthly of the solve number. Flat within the solve numb	95,350 157.1 58,153 10,042 27,155 d approved by BPA (or I	121,605 200.4 85,752 3,073 32,780 BPA forecast if custom pulsas TRL less NLSLs an	107,113 190.8 77,453 2,574 27,086 er forecast not approved Exisiting Resources.

					st dedicate New Specifie oad. If New Specified Re
Net Requirement Forecast (MWh)	6,015	25,914	25,695	31,320	25,767
	18/ Net Requirements	equals TRL less NLS	Ls, Existing Resources, N	ew Resources (Specifi	ed and Unspecified), and

JLSL Calculations (if applicable) Prepared by BPA, July 28, 2021					
	October	November	December	January	February
ILSL Forecast (MWh)	58,153	56,356	58,153	85,752	77,453
esources Serving an NLSL (MWh)	42,751	41,372	42,751	42,751	38,614
hange to NLSL Resources (MWh)	15,402	14,984	15,402	43,001	38,839
Ipdated Resources Serving NLSL (MWh)	58,153	56,356	58,153	85,752	77,453
	18/ Original resource	e amounts from Exhibit	A. Update NLSL resour	rces in Exhibit A to ma	tch NLSL forecast.
hange to Existing Resources (MWh)	-15,402	-8,536	-12,061	-8,158	-4,344
hange to Existing Resources (aMW)	-20.702	-11.839	-16.212	-10.965	-6.464
pdated Total Existing Resources (MWh)	14,685	2,905	10,042	3,073	2,574
pdated Total Existing Resources (aMW)	19.737	4.029	13.497	4.130	3.830
	19/ If customer has a	a single resource split a	mongst NLSL and non-N	NLSL load, then balanc	e the single resourc
,	19/ If customer has	a single resource split a	mongst NLSL and non-N	NLSL load, then balanc	e the single re
Removal of Existing Resources in Second Year of R	ate Period (if applicabl	e)			
repared by BPA, July 28, 2021		1st Year = 0, Second	d Year = 1		
repared by br A, July 26, 2021		, 13t Tear - 0, Second	1 (Ca) — 1		

1st Year = 0, Second Year = 1

29/ Existing Resource Removal for Subsequent Fiscal Years of Each Rate Period (section 10.5 of the Slice/Block Contracts) is applicable for customers that have Existing Resour that is less than the preliminary Net Requirement in the first year of a rate period. Preliminary Net Requirement means BPA's forecast of Customer's Net Requirement for each

Customer Specific Data for Fiscal Year 2021 2021 2022 2022

Prepared by BPA, July 28, 2021 RHWM BES Number	24.581 10306	10 416 328	11 400 321	12 416 328	1 400 344	2 384 288
T2 Block Amounts TRL Forecast - Energy (MWh) TRL Forecast - Peak (MW) NLSL Forecast Existing New NLSL Block Shaping Factors HLH Shaping Factors LLH Shaping Factors	0	80,313 132.585 58,153 30,087 0 42,751 0.034 0.559 0.419	86,590 149.663 56,356 11,441 0 41,372 0.149 0.555 0.445	95,350 157.084 58,153 22,103 0 42,751 0.135 0.559	121,605 200.391 85,752 11,231 0 42,751 0.190 0.538 0.441	107,113 190.756 77,453 6,918 0 38,614 0.168 0.571 0.425
Existing Resource Removal Shape New Resource Removal Shape		0.119 0.000	0.039 0.000	0.084 0.000	0.037 0.000	0.020 0.000

Customer Charges and Load Shaping Charges Prepared by BPA, July 28, 2021

HLH by Month LLH by Month	October 416 328	November 400 321	December 416 328	January 400 344	February 384 288
RHWM T1 System Capability HLH (MWh) RHWM T1 System Capability LLH (MWh)	2,920,790 1,633,134	3,537,945 2,227,488	3,223,873 2,419,335	2,651,580 2,009,470	2,346,690 1,693,144
BP-22 Final Proposal Rates Composite Rate (TOCA) (\$\$/%) Non-Slice Rate (\$\$/%) Slice Rate (\$\$/%) Load Shaping - HLH (\$\$/MWh) Load Shaping - LLH (\$\$/MWh) Financial Reserves Policy Surcharge Financial Reserves Policy Amount Financial Reserves Policy Surcharge	\$1,998,417 (\$329,943) \$0 \$29.92 \$28.27 \$0.00 \$0.0	\$1,998,417 (\$329,943) \$0 \$31.71 \$29.14 \$0.00 \$-Millions	\$1,998,417 (\$329,943) \$0 \$38.76 \$32.05 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.29 \$25.85 \$0.00	\$1,998,417 (\$329,943) \$0 \$34.79 \$28.29 \$0.00
<u>FY2022 Billing Determinants</u> TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%

Non-Slice TOCA %	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%
Load Shaping - HLH (MWh)	-6,498	4,690	4,460	12,324	12,173
, , ,	•	•	•	•	•
Load Shaping - LLH (MWh)	-2,679	5,996	3,964	11,587	9,374
FY2022 Tier 1 Power Charges without Low Density	Discounts or Irrigation Ro	ate Discounts			
Composite Charge	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222
Non-Slice Charge	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)
Load Shaping - HLH	(\$194,419)	\$148,721	\$172,873	\$422,603	\$423,496
Load Shaping - LLH	(\$75,744)	\$174,720	\$127,041	\$299,535	\$265,183
Financial Reserves Policy Surcharge	\$0	\$0	\$0	\$0	\$0
Total	\$338,663	\$932,267	\$908,740	\$1,330,964	\$1,297,505
Steps in calculating Load Shaping Billing Determin	<u>iants</u>				
System Shaped Load HLH (MWh)	10,658	12,910	11,764	9,676	8,563
System Shaped Load LLH (MWh)	5,959	8,128	8,828	7,333	6,178
Actual Tier 1 Load HLH (MWh)	4,160	17,600	16,224	22,000	20,736
Actual Tier 1 Load LLH (MWh)	3,280	14,124	12,792	18,920	15,552

Step 3: Critical Slice & Block Amounts (with TOCAs)

(in annual aMW)

 Tier 2 Block Amounts
 0.000

 Tier 1 Block Amounts 11/
 24.581

 Net Requirements
 24.581

TOCAs 12/

Sum of RHWM 6736.361

Non-Slice TOCA 0.36490% TOCA 0.36490%

Notes:

11/ Tier 1 Block Amounts equal Net Requirement less Tier 2 Amounts. Annual Tier 1 Block Amounts (in aMW) go into section 1.1 of Exhibit C. 12/ TOCA equals minimum of Net Requirement or RHWM, divided by the Sum of RHWM. Sum of RHWM in cell J18. Non-Slice TOCA equals TOCA.

PEND OREILLE PUD, page 2

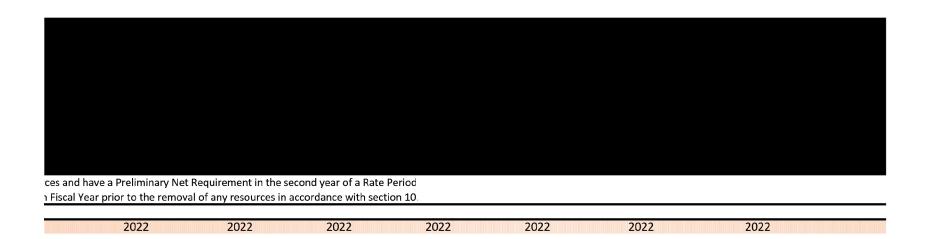
March 743	April 720	May 744	June 720	July 744	August 744	September 720	ANNUAL 8,760
0.450	0.010	0.000	0.000	0.000	2 222	0.070	4 000
0.159	0.010	0.000	0.000	0.038	0.039	0.078	1.000
34,237 0	2,153 0	0 0	0 0	8,183	8,398	16,796	215,330
_	· 1 Block Amounts in aN	=	_	0	0	0	0
tors · Affiliaal Fier	1 Block Alliounts III an	vivv (see step s) · not	ars iii riscar fear				
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
ir Net Requireme	nt. Not applicable to co	ustomers who elected	l flat Tier 1 block with	in-month shape.			•
46.0	3.0	0.0	0.0	11.0	11.0	23.0	214 654
							214,654
4C O	2 ∩						
thly MWh amour	3.0 3.0 of Exhibit C multiplied ats calculated per 1.2.1	4 of Exhibit C divided	by the hours in the m	onth,	11.0 11.0	23.0 23.0	
46.0 ulated per 1.2.14 ithly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the mawatt-hours calculate	11.0 e hours in the month, onth, ed in cell 050.	11.0	23.0	214 654
46.0 ulated per 1.2.14 othly MWh amour	3.0 of Exhibit C multiplied hts calculated per 1.2.1	0.0 by the diurnal shaping 4 of Exhibit C divided	0.0 g factor, divided by the by the hours in the m	11.0 e hours in the month, onth,			214,654
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish	3.0 of Exhibit C multiplied nts calculated per 1.2.1 ed in cell O55 will be d	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg	0.0 g factor, divided by the by the hours in the mawatt-hours calculate	11.0 e hours in the month, onth, ed in cell 050.	11.0	23.0	214,654
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178	3.0 of Exhibit C multiplied nts calculated per 1.2.1 ed in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, onth, ed in cell 050. 8,184	8,184	23.0 16,560	
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, onth, ed in cell 050. 8,184	11.0 8,184 103,535	23.0 16,560 101,104	1,225,09
46.0 Ilated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0 100,646 159.6	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8	8,184	16,560 101,104 163.8	1,225,09 [,] N/A
46.0 ulated per 1.2.14 thly MWh amour tt-hours establish 34,178	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0	0.0 g factor, divided by the by the hours in the m awatt-hours calculate 0	11.0 e hours in the month, onth, ed in cell 050. 8,184	11.0 8,184 103,535 156.7	23.0 16,560 101,104	1,225,09 [,] N/A
46.0 Ilated per 1.2.14 thly MWh amour It-hours establish 34,178 113,627 183.8 85,636 2,846 25,145	3.0 of Exhibit C multiplied ats calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985	1,225,09 N/A 927,715 64,848
46.0 Ilated per 1.2.14 Ithly MWh amour It-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 s for additional calcula	11.0 8,184 103,535 156.7 85,752 3,477 14,306	16,560 101,104 163.8 82,985 3,046	1,225,09 N/A 927,715 64,848
46.0 Ilated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener o add New Resou	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 6 for additional calcula lequirements.	11.0 8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,09 N/A 927,715 64,848 232,531
46.0 Ilated per 1.2.14 thly MWh amour t-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener o add New Resou	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into urces if customer has A	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 6 for additional calcula lequirements.	11.0 8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,09 ² N/A 927,715
46.0 ulated per 1.2.14 hthly MWh amour tt-hours establish 34,178 113,627 183.8 85,636 2,846 25,145 RL Forecast (ener to add New Resou	3.0 of Exhibit C multiplied its calculated per 1.2.1 ed in cell O55 will be d 2,160 106,167 175.8 82,985 3,802 19,380 gy and peak) goes into	0.0 by the diurnal shaping 4 of Exhibit C divided ifferent than the meg 0 105,248 171.9 85,752 8,002 11,494 section 1.1 of Exhibit bove-RHWM Load be	0.0 g factor, divided by the by the hours in the mawatt-hours calculate 0 100,646 159.6 82,985 6,729 10,932 A. If NLSL see page 3 fore calculating Net R	11.0 e hours in the month, onth, ed in cell 050. 8,184 103,796 161.8 85,752 3,668 14,376 6 for additional calcula lequirements.	11.0 8,184 103,535 156.7 85,752 3,477 14,306 tions.	16,560 101,104 163.8 82,985 3,046 15,073	1,225,09 ² N/A 927,715 64,848 232,531

ed Resources (ie Hydro Resources) and does not have enough (or any) Above-RHWM Load, esources were not added to serve Above-RHWM Load, then Unspecified Resource Amounts will be added.

23,686	17,966	10,034	9,518	12,916	12,846	13,659	215,335		
display TO Amounts. Not Descriptoments goes into continu 1.2 of Exhibit A									

d plus T2 Amounts. Net Requirements goes into section 1.2 of Exhibit A.

						PEND OREILLE PUD, pa	age 3
March	April	May	June	July	August	September	ANNUAL
85,636	82,985	85,752	82,985	85,752	85,752	82,985	927,715
42,751	41,372	42,751	41,372	42,751	42,751	41,372	503,359
42,885	41,613	43,001	41,613	43,001	43,001	41,613	424,356
85,636	82,985	85,752	82,985	85,752	85,752	82,985	927,715
-4,194	-29,566	-34,850	-31,355	-19,615	-18,575	-11,293	-197,950
-5.645	-41.064	-46.841	-43.549	-26.364	-24.966	-15.685	64,848
2,846	3,802	8,002	6,729	3,668	3,477	3,046	
3.830	5.281	10.755	9.346	4.930	4.673	4.231	
to match the NL	SL forecast keeping the	e total dedicated amo	unts the same.				



26980092 BPA-2022-00699-F 0883

3	4	5	6	7	8	9 A	nnual
432	416	400	416	400	432	400	
311	304	344	304	344	312	320	
113,627	106,167	105,248	100,646	103,796	103,535	101,104	1,225,094 927,715 262,798 0 503,359 1.000
183.772	175.781	171.924	159.600	161.786	156.652	163.785	
85,636	82,985	85,752	82,985	85,752	85,752	82,985	
7,040	33,368	42,852	38,084	23,283	22,052	14,339	
0	0	0	0	0	0	0	
42,751	41,372	42,751	41,372	42,751	42,751	41,372	
0.159	0.010	0.000	0.000	0.038	0.039	0.078	
0.581	0.578	0.538	0.578	0.538	0.581	0.556	
0.440	0.422	0.462	0.422	0.441	0.441	0.444	
0.019 0.000	0.133 0.000	0.173 0.000	0.154 0.000	0.089 0.000	0.084 0.000	0.051 0.000 END OREILLE PUD, pag	1.000
					r	LIVO ONLILLE POD, pag	E 4
March	April	May	June	July	August	September	ANNUAL
432	416	400	416	400	432	400	4912
311	304	344	304	344	312	320	3848
2,961,839	2,307,314	3,495,710	3,952,933	3,505,339	3,425,259	2,999,685	37,328,957
1,860,906	1,436,906	1,691,935	1,590,174	1,757,589	1,660,955	1,700,508	21,681,545
\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	\$1,998,417	
(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	(\$329,943)	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$27.57	\$20.71	\$16.28	\$17.15	\$36.83	\$35.87	\$28.15	
\$28.44	\$25.66	\$16.30	\$10.62	\$21.36	\$26.85	\$28.95	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	

0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	0.36490%	
9,064	-7,171	-12,756	-14,424	-8,391	-7,747	-1,746	
7,516	-4,331	-6,174	-5,803	-2,629	-2,629	1,155	
\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$729,222	\$8,750,664
(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$120,396)	(\$1,444,752)
\$249,901	(\$148,519)	(\$207,665)	(\$247,376)	(\$309,040)	(\$277,877)	(\$49,146)	(\$16,448)
\$213,742	(\$111,140)	(\$100,634)	(\$61,623)	(\$56,165)	(\$70,584)	\$33,433	\$637,764
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$1,072,469	\$349,167	\$300,527	\$299,827	\$243,621	\$260,365	\$593,113	\$7,927,228
10,808	8,419	12,756	14,424	12,791	12,499	10,946	136,213
6,790	5,243	6,174	5,803	6,413	6,061	6,205	79,116
19,872	1,248	0	0	4,400	4,752	9,200	120,192
14,306	912	0	0	3,784	3,432	7,360	94,462

aMW

24.581 0.000

24.504

24.504

139.851 N/A 105.904 7.403 26.544

1.963

0.000

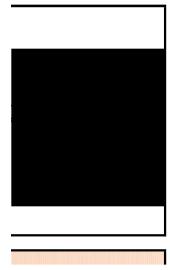
24.581

aMW 105.904

57.461 48.442 105.904

-22.597

7.403



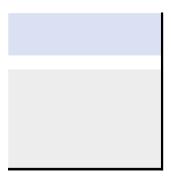
aMW

139.851

105.904 30.000 0.000 57.461

aMW

7,599.543 5,634.497 6736



From: April Owen

Sent: Thu Sep 02 09:35:54 2021

To: Normandeau, Mike (BPA) - PSE-RONAN; Patton, Kathryn B (BPA) - PSS-SEATTLE

Cc: Babaidhan, Sami A (BPA) - PSSE-MEAD-GOB; Tyler Whitney

Subject: FW: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Importance: Normal

Attachments: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx

Mike and Kate,

The email that I am forwarding is Andres's latest TRL forecast using amounts that we had included in our public comments. Now that we know that it may be possible based on BPA transmission study timelines to start the mill in November, we are going to stick with our customer's previous prediction for total load. The numbers Andres included are summarized here:

The exception is that Andres had 165 from July – September, and we should increase that to 190 for those 3 months.

Thanks for the discussion and running the different scenarios – you both have been very helpful in working through this process. This should be our final submission.
I will be out for the next several hours but will be back in the office this afternoon after 1:30 if you have questions.

Thanks!

April.

April Owen

Director, Audit, Finance & Power Supply

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington | Newport, WA 99156

509.447.9321 | aowen@popud.org | www.popud.org

2

26980093 BPA-2022-00699-F 0892

From: Cicarelli, Andres A (BPA) - KSL-BELL-1 <aacicarelli@bpa.gov> Sent: Friday, August 20, 2021 12:09 PM To: April Owen <aowen@popud.org> Cc: Normandeau, Mike (BPA) - PSE-RONAN < mrnormandeau@bpa.gov> Subject: Pend Oreille FY2022 Forecast Breakout 2021-8-18.xlsx CAUTION: This email originated from outside of the POPUD. Do not click links or open attachments unless you recognize the sender and know the content is safe. Hi April, Attached is the revised FY2022 forecast for Pend Oreille based on the PUD's comments. Any thoughts? Talk to you later, **Andres**

		Pend Oreill	e PUD Total					
		MWh	HLH	LLH	aMW	CP		
oct	2021	40613.76	23224.83	17388.93	55	74.573	744	oct
nov	2021	113476.1	64090.6	49385.47	158	190.197	719	nov
dec	2021	123098.8	69474.6	53624.23	165	197.629	744	dec
jan	2022	140166.8	79274.8	60892.02	188	227.509	744	jan
feb	2022	123878.3	70497.77	53380.54	184	217.875	672	feb
mar	2022	132158.1	75366.41	56791.73	177	210.882	745	mar
apr	2022	141926.5	80879.71	61046.79	197	229.766	720	apr
may	2022	142204.5	80649.17	61555.37	191	225.903	744	may
jun	2022	136437.5	77835.08	58602.44	189	213.601	720	jun
jul	2022	140738.9	79903.22	60835.69	189	215.78	744	jul
aug	2022	140486.7	80214.51	60272.19	189	210.638	744	aug
sep	2022	136864.5	77619.19	59245.34	190	217.773	720	sep

Beginning October 1, 2021 = 25 a

Ponderay Renewable Fiber & Blockchain

	MWh	HLH	LLH	aMW	NCP
2021	18388.24	10481.3	7906.944	25	27
2021	83217.91	47434.21	35783.71	115	125
2021	85889.28	48956.89	36932.39	115	125
2022	104289.4	59444.94	44844.43	140	152
2022	94197.67	53692.67	40504.99	140	152
2022	104116.9	59346.66	44770.29	140	152
2022	118692.1	67654.5	51037.6	165	179
2022	122665.5	69919.34	52746.17	165	179
2022	118796.1	67713.8	51082.33	165	179
2022	122620	69893.41	52726.62	165	179
2022	122649.6	69910.27	52739.33	165	179
2022	118695.5	67656.42	51039.05	165	179

¹MW • Beginning November 1, 2021 = 115 aMW • Beginning January 1, 2022 = 140 aMW • Beginning

April 1, 2022 = 165 aMW

From: David Hodder

Sent: Mon Sep 20 10:27:58 2021

To: Todd Behrend; Lacambra, Jared M (BPA) - TPCF-MEAD-GOB; Keyannie, Kendrick (BPA) - TFSD-BELL; Walker, Nichloas P (BPA) - TFSB-BELL; Fedchun, Pavel (BPA) - TFSB-USFS NEWPORT; Philip Roice; Steven Metzger

Subject: Ponderay Industries (PNC) 230 kV work planning

Importance: Normal

This is to review the plan, and have a general Q&A regarding testing equipment and reenergizing the 230 feeder from BPA.

If I missed anyone on this invite please forward it to them.

David

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Pend Oreille County Public Utility District #1

From: Fedchun, Pavel (BPA) - TFSB-USFS NEWPORT

Sent: Mon Sep 20 14:54:39 2021

To: David Hodder

Subject: Accepted: Ponderay Industries (PNC) 230 kV work planning

Importance: Normal

From: Harris, Adelle L (TFE)(BPA) - TSES-TPP-2

Sent: Tue Sep 21 07:33:56 2021

To: Jones,Ryan M (BPA) - TPP-OPP-3; Mendez-Sierra,Akira M (BPA) - TPPC-OPP-3; Rochelle,Patrick R (BPA) - TPPB-OPP-3; Lacambra,Jared M (BPA) - TPCF-MEAD-GOB; cwillenbrock@popud.org; April Owen; Tyler Whitney; David Hodder; Sarah Holderman

Cc: Kitali, Salah H (BPA) - TP-DITT-2; Cook, Jeffrey W (BPA) - TP-DITT-2; Smith, Jack A (BPA) - TSBM-TPP-2

Subject: BPA Deep Dive Presentation

Importance: Normal

Attachments: Webex_Meeting.ics; Pend Oreille PUD_Deep Dive.pdf

Attaching Deep Dive presentation.

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Find help on how to use and install Webex.

You can forward this invitation to others.

Conference Room Services 3 is inviting you to a scheduled Webex meeting.

Thursday, September 23, 2021

10:00 AM | (UTC-07:00) Pacific Time (US & Canada) | 1 hr

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Join from the meeting link

https://mybpa.webex.com/mybpa/j.php?MTID=m0b6f5a9f734bc81d9b472b129cb5d639

Join by meeting number

Meeting number (access code): (b)(6)

Meeting password (b)(6)

Tap to join from a mobile device (attendees only)

<u>+1-415-527-5035</u>,(b)(6) US Toll

3

Join by phone



Global call-in numbers

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Deep Dive

Pend Oreille PUD



Key Outcomes

Pend Oreille:

- Understand BPA Planning
- Understand Area, Issues & Limits



Key Outcomes

BPA Planning:

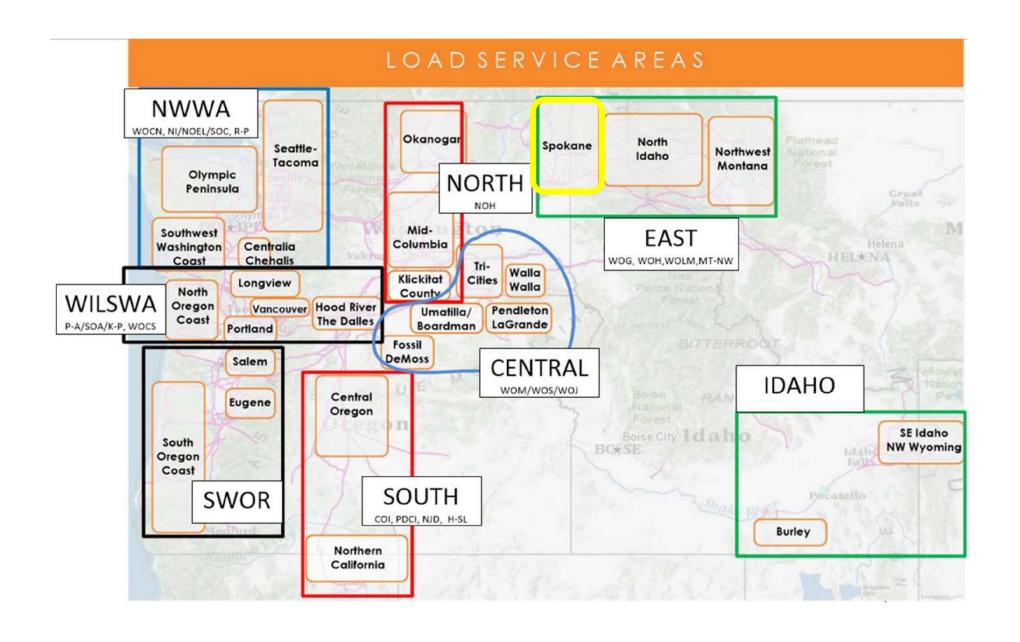
- Understand Area, Issues & Limits
- Understand Pend Oreille Plans



Understanding BPA Planning

Annual System Wide Assessments

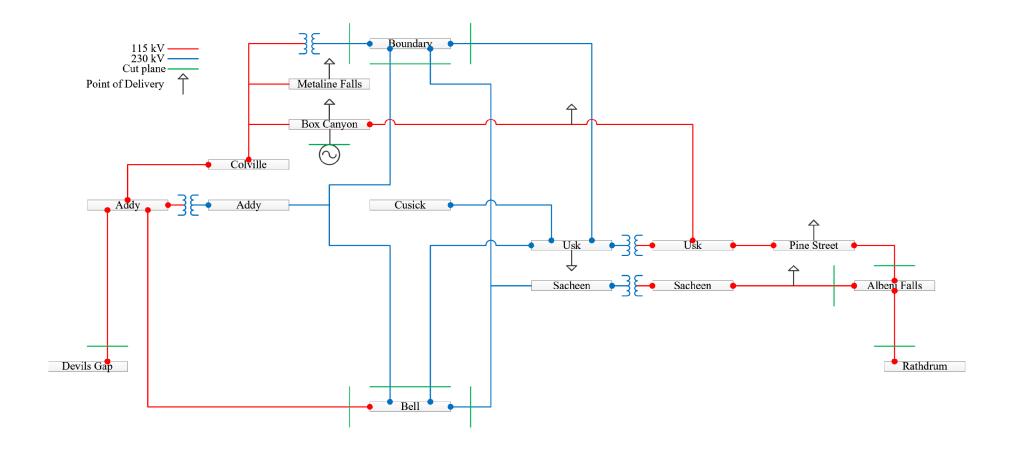




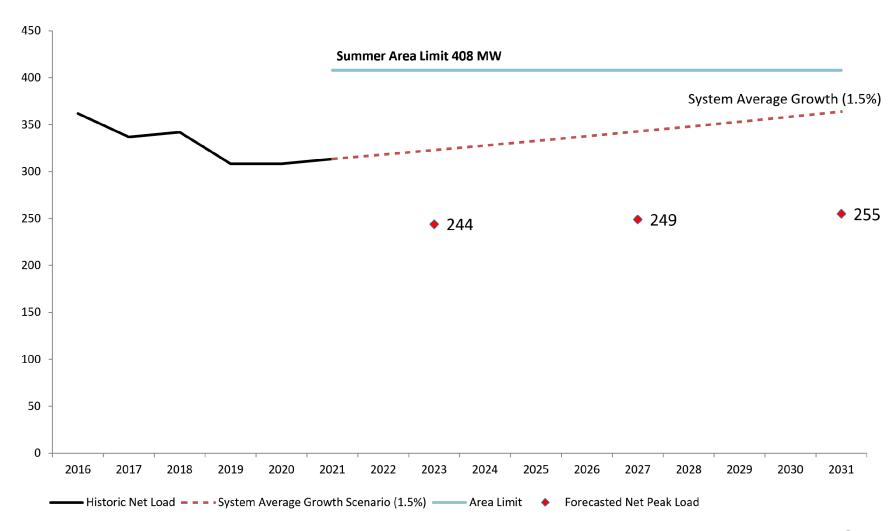
Pend Oreille PUD Points of Delivery

- Box Canyon
- Cusick
- Diamond Lake
- Metaline
- Pine Street
- Usk

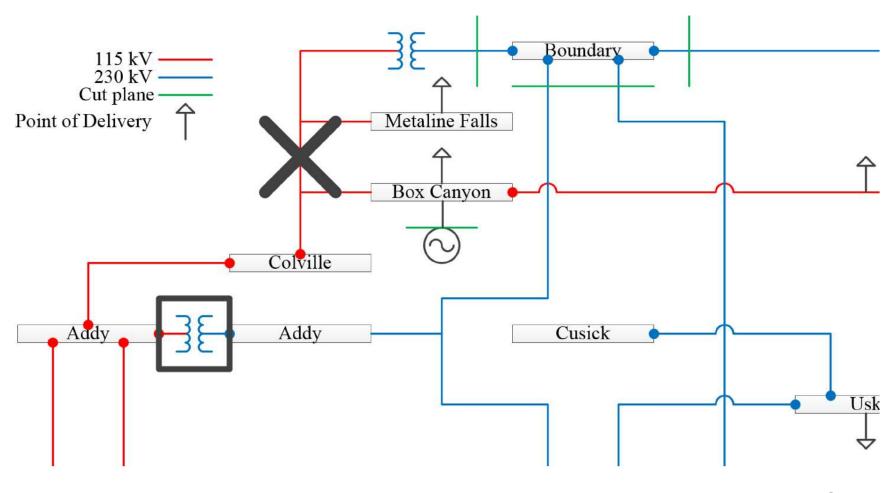
Boundary Colville Cut Plane



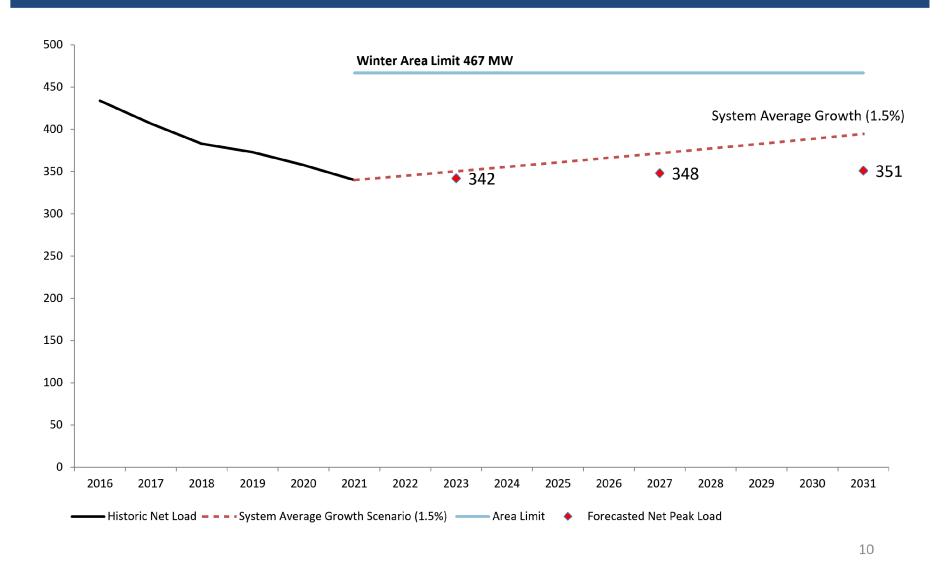
Boundary Colville Summer Cut Plane Limit



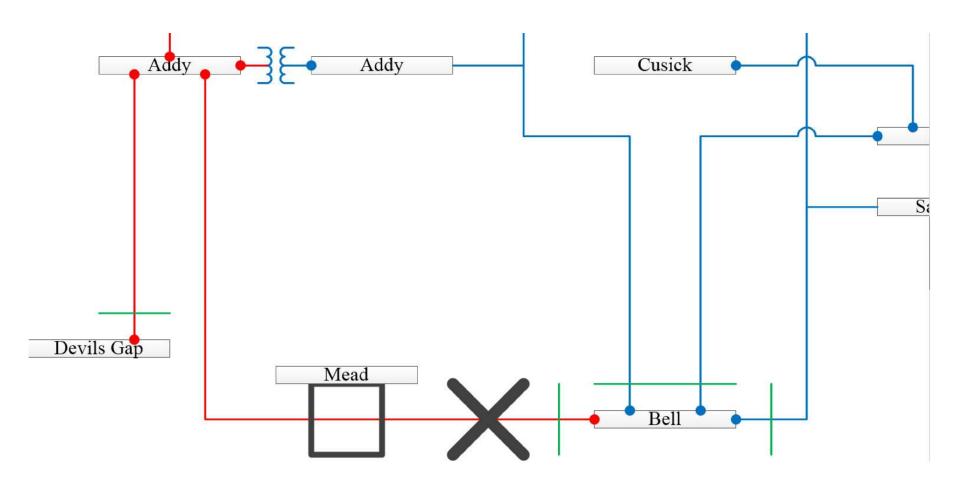
Summer Cut Plane Limit



Boundary Colville Winter Cut Plane Limit



Winter Cut Plane Limit



11

BPA Projects

- Sacheen 230 kV Ring Bus
 - Upgrade the Sacheen 230 kV non-standard bus to a standard ring bus configuration.
 - Energization Date: 12/1/21
- Bell 230/115 kV Transformer Replacement
 - The existing nameplate rating is 250 MVA and it is expected to be replaced to 300 MVA.
 - Energization Date: 2025

BPA Projects

- Addy 230 kV Reconfiguration
 - Study the impacts of reconfiguring Addy 230 kV to a standard bus configuration.
- Boundary Colville Cut Plane Reactor
 - Determine where a reactor fits to reduce the high voltages in the area.

Interconnection Projects

- L0485
 - A new 230 kV substation that loops into the Grand Coulee-Bell #5 230 kV line.

- L0494
 - 300 MW load request at Usk 230 kV substation.

From: Conference Room Services 3 Sent: Fri Aug 20 22:42:22 2021

Required: Conference Room Services 3 Subject: Deep Dive Presentation

Priority: Normal

StartTime: Thu Sep 23 18:00:00 2021 EndTime: Thu Sep 23 19:00:00 2021

Location: https://mybpa.webex.com/mybpa/j.php?MTID=m0b6f5a9f734bc81d9b472b129cb5d639

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Meeting number (access code): (b)(6)

Meeting password: (b)(6)

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(b)(6)

US Toll

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Global call-in numbers

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JOIN FROM A VIDEO SYSTEM OR APPLICATION Dial sip:(b)(6) @mybpa.webex.com

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in.php?MTID=mce95afdb4403b1e0bcd312960f5a5494" style="text-decoration:none;fontsize:14px;color:#005E7D">Global call-in numbers</font-

<td style="height:20px">

Join from a video system or application
<FONT SIZE="2" COLOR="#666666"

```
FACE="arial">Dial</FONT> <a href="sip:1998874406@mybpa.webex.com"><FONT SIZE="2"
COLOR="#005E7D" FACE="arial">1998874406@mybpa.webex.com</FONT></a>&nbsp;
<BR></FONT>&nbsp; <BR>
      <td
style="height:20px"> 
                   
                        <td style="height: 24px; color:
#000000; font-family: Arial; font-size: 14px; line-height: 24px; ">Need help? Go to <a
href="https://help.webex.com" style="color:#005E7D; text-
decoration:none;">https://help.webex.com</a>
```

From: David Hodder Sent: Tue Sep 21 13:25:38 2021 To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB; BPA-CSReliabilityProgram Cc: Cardoza,Lorissa J (BPA) - TPCR-TPP-4 Bcc: ljjones@bpa.gov; CSReliabilityProgram@bpa.gov Subject: [EXTERNAL] RE: BPA USK line Importance: Normal Attachments: Cusick-Usk.pdf Hi Jared It's the Cusick - Usk 230 kV line. See attached.

1

Thanks,

Regards,

David J Hodder P.E.

Engineering Manager

Phone 509 447-3137

Cell (b)(6)

Public Utility District No. 1 of Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < jmlacambra@bpa.gov>

Sent: Tuesday, September 21, 2021 10:24 AM

To: BPA-CSReliabilityProgram <CSReliabilityProgram@bpa.gov>; David Hodder <DHodder@popud.org>

Cc: Cardoza,Lorissa J (BPA) - TPCR-TPP-4 < lijjones@bpa.gov>

Subject: RE: BPA USK line

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2

Good Morning David,

Can you share a diagram with some arrows showing the sections you are looking for? That would be helpful in our search. Specifically because we are unsure of the tap you are referencing. We want to make sure we are understanding the request correctly.

Jared Lacambra

Customer Service Engineer | TPCF-MEAD-GOB

Bonneville Power Administration | Department of Energy 1620 E. Hawthorne Rd. Mead, WA, 99021

jmlacambra@bpa.gov

(509) 822-4605 (office)

From: BPA-CSReliabilityProgram < CSReliabilityProgram@bpa.gov>

Sent: Friday, September 17, 2021 1:29 PM

To: DHodder@popud.org

3

Cc: BPA-CSReliabilityProgram < <u>CSReliabilityProgram@bpa.gov</u>>; Cardoza,Lorissa J (BPA) - TPCR-TPP-4 < lijones@bpa.gov>; Lacambra,Jared M (BPA) - TPCF-MEAD-GOB < <u>imlacambra@bpa.gov</u>>

Subject: RE: BPA USK line

Good afternoon David,

BPA has received POPD's request for the USK conductor size and tap facility limit. We will start processing this request and I will get back to you shortly.

Have a great weekend,

Michael Granath

Customer Service Program Specialist | TPCR

Bonneville Power Administration

<u>bpa.gov</u> | P N/A | C(b)(6)

cid:image001.jpg@01D52C3E.DF0B9390cid:image008.jpg@01D52C3E.09FCE1E0cid:image009.jpg@01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0cid:image012.jpg@01D52C3E.09FCE1E0

MT:05A4428

4

From: David Hodder < <u>DHodder@popud.org</u>>
Sent: Thursday, September 16, 2021 10:39 AM

To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < imlacambra@bpa.gov >

Subject: [EXTERNAL] BPA USK line

Hi JAred,

Allrise / PNC has asked for the size of the BPA 230 kV feeder conductor at USK.. Also if you can, what do you have a facility limit for that tap? (that might nip this)

They have Craig Ripplinger calculating the capacity of the substation. He is an electrical engineer based out of Spokane Valley who has done a lot of work in the PUD area over the years.

Regards,

David J Hodder P.E.

Engineering Manager

Public Utility District No. 1 of Pend Oreille County

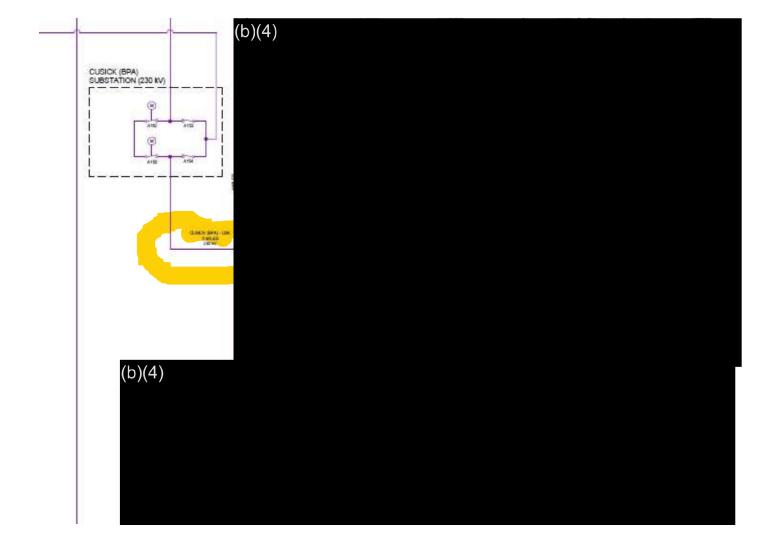
cid:cfdd47bf-81dd-4dc4-b122-d5c15b5b69d9P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

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Pend Oreille County Public Utility District #1

6



From: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB

Sent: Thu Sep 23 07:45:19 2021

To: David Hodder

Subject: Accepted: Ponderay Industries (PNC) 230 kV work planning

Importance: Normal

From: BPA-CSReliabilityProgram

Sent: Thu Sep 23 10:40:01 2021

To: David Hodder

Cc: Cardoza,Lorissa J (BPA) - TPCR-TPP-4; Lacambra,Jared M (BPA) - TPCF-MEAD-GOB; BPA-CSReliabilityProgram; Harris,Adelle L (TFE)(BPA) - TSES-TPP-2

Subject: BPA Response POPD FAC-008 Data Request

Importance: Normal

Attachments: USK-Boundary No1 230kV line Normal Ratings.pdf; USK-Boundary No 230kV line Emergency Ratings.pdf

Good afternoon David,

Thank you for your patience. BPA is able to provide both the Normal and Emergency ratings for the Cusick-USK 230 kV portion of the USK-Boundary No1 230kV line. Please see attached.

For the conductor size, please refer to the table below for the specific conductor type of the Cusick-USK 230 kV line. Please let me know if there is an issue determining actual size from the conductor type listed and BPA can provide further assistance.

If you have any questions, or if we can be of further assistance, please do not hesitate to reach out.

Thank you,

Michael Granath

Customer Service Program Specialist | TPCR

Bonneville Power Administration

<u>bpa.gov</u> | P N/A | C (b)(6)

<u>cid:image001.jpg@01D52C3E.DF0B9390cid:image008.jpg@01D52C3E.09FCE1E0cid:image009.jpg@01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0cid:image012.jpg@01D52C3E.09FCE1E0</u>

MT:05A4428

From: David Hodder < DHodder@popud.org > Sent: Tuesday, September 21, 2021 1:26 PM

To: Lacambra, Jared M (BPA) - TPCF-MEAD-GOB < jmlacambra@bpa.gov >; BPA-CSReliabilityProgram

2

<csreliabilityprogram@bpa.g< p=""> Cc: Cardoza,Lorissa J (BPA) - Subject: [EXTERNAL] RE: BP</csreliabilityprogram@bpa.g<>	TPCR-TPP-4 < lijjones@bpa.gov>
Hi Jared	
It's the Cusick – Usk 230 kV lin	e.
See attached.	
Thanks,	
Regards,	
David J Hodder P.E.	
Engineering Manager	
Phone 509 447-3137	
Cell (b)(6)	
Public Utility District No. 1 of	Pend Oreille County

P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

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Cc: Cardoza,Lorissa J (BPA) - TPCR-TPP-4 < ijjones@bpa.gov>

Subject: RE: BPA USK line

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ljjones@bpa.gov>; Lacambra,Jared M (BPA) - TPCF-MEAD-GOB <jmlacambra@bpa.gov>

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Michael Granath

Customer Service Program Specialist | TPCR

Bonneville Power Administration

<u>bpa.gov</u> | P N/A | C (b)(6)

<u>cid:image001.jpg@01D52C3E.DF0B9390cid:image008.jpg@01D52C3E.09FCE1E0cid:image009.jpg@01D52C3E.09FCE1E0cid:image010.jpg@01D52C3E.09FCE1E0cid:image011.jpg@01D52C3E.09FCE1E0cid:image012.jpg@01D52C3E.09FCE1E0</u>

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6

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Regards,

David J Hodder P.E.

Engineering Manager

Public Utility District No. 1 of Pend Oreille County

cid:cfdd47bf-81dd-4dc4-b122-d5c15b5b69d9P.O. Box 190 | 130 N. Washington

Newport, Washington 99156

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Pend Oreille County Public Utility District #1

BPA Facility Ratings Report Baseline Date 9/9/2021 3:57:33 PM

							Parallel Normal									
Facility Name	ТОР	Substation	Position	Equipment ID	Type / Category		-15	-10	-5	0	5	10	20	30	40	
University (EWEB)-	Yes	University (EWEB)	EWEB	EWEB WILLAMET-UNIV 6050	Circuit Breakers / 6050	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
Willamette 115kV				Circuit Breaker 3		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV 6060	Circuit Breakers / 6060	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
				Circuit Breaker 4		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD7073 Disconnect 1	Disconnect / MOD7073	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD7071 Disconnect 2	Disconnect / MOD7071	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
				WODTOTT DISCONNECT 2		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD7063 Disconnect 3	Disconnect / MOD7063	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
				WOD7 003 DISCONNECT 3		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD7061 Disconnect 4	Disconnect / MOD7061	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
				WCD7001 Disconnect 4		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6063 Disconnect 5	Disconnect / MOD6063	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6049 Disconnect 6	Disconnect / MOD6049	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6051 Disconnect 7	Disconnect / MOD6051	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6053 Disconnect 8	Disconnect / MOD6053	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
				EWEB WILLAMET-UNIV MOD6061 Disconnect 9	Disconnect / MOD6061	Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
		University (EWEB)	EWEB			MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000	
Usk-Boundary No 1	No	No	Usk	A-951	D11865	Disconnect /	MVA	2162.4	2116.2	2068.4	2020.6	1971.2	1920.2	1816.6	1708.2	1593.4
230kV line					DISCGroupOperated	Amps	5428	5312	5192	5072	4948	4820	4560	4288	4000	
		Usk A-952	A-952	D11866	Disconnect / DISCGroupOperated	MVA	2396.6	2347.2	2294.6	2242.0	2187.8	2132.0	2017.4	1838.8	1593.4	
						Amps	6016	5892	5760	5628	5492	5352	5064	4616	4000	
		Usk	A-953	O02729	Circuit Breakers /	MVA	2162.4	2116.2	2068.4	2020.6	1971.2	1920.2	1816.6	1708.2	1593.4	
					BKRGasPufferAir	Amps	5428	5312	5192	5072	4948	4820	4560	4288	4000	
		Usk	A-954	D11867	Disconnect /	MVA	2162.4	2116.2	2068.4	2020.6	1971.2	1920.2	1816.6	1708.2	1593.4	
					DISCGroupOperated	Amps	5428	5312	5192	5072	4948	4820	4560	4288	4000	
		Usk	A-955	O02730	Circuit Breakers /	MVA	2162.4	2116.2	2068.4	2020.6	1971.2	1920.2	1816.6	1708.2	1593.4	
					BKRGasPufferAir	Amps	5428	5312	5192	5072	4948	4820	4560	4288	4000	
		Usk	A-956	D11864	Disconnect /	MVA	2162.4	2116.2	2068.4	2020.6	1971.2	1920.2	1816.6	1708.2	1593.4	
					DISCGroupOperated	Amps	5428	5312	5192	5072	4948	4820	4560	4288	4000	
		Usk	N/A	Str 7/1-Cusick	OTF_StructuresAndLines /	MVA	733.0	717.1	701.1	685.2	669.3	649.3	609.5	569.7	569.7	
					Pheasant	Amps	1840	1800	1760	1720	1680	1630	1530	1430	1430	
		Usk	N/A	Usk-Str 7/1	OTF_StructuresAndLines /	MVA	729.0	713.1	697.2	677.2	661.3	645.4	605.5	565.7	565.7	
					Bittern	Amps	1830	1790	1750	1700	1660	1620	1520	1420	1420	

BPA Facility Ratings Report Baseline Date 9/9/2021 3:57:33 PM

							Parallel Normal								
Facility Name	ТОР	Substation	Position	Equipment ID	Type / Category		-15	-10	-5	0	5	10	20	30	40
Usk-Boundary No 1	No	Usk	N/A	Cusick-Str 41/3	OTF_StructuresAndLines /	MVA	733.0	717.1	701.1	685.2	669.3	649.3	609.5	569.7	569.7
230kV line					Pheasant	Amps	1840	1800	1760	1720	1680	1630	1530	1430	1430
		Cusick	A-153	ID0177	Circuit Switcher /	MVA	1792.0	1750.2	1707.4	1663.8	1619.4	1573.8	1479.6	1380.2	1274.8
					CSwithDisconnect	Amps	4498.56	4393.28	4286.08	4176.64	4064.96	3950.72	3714.24	3464.64	3200
		Cusick	A-154	ID0178	Circuit Switcher /	MVA	1438.0	1408.4	1376.8	1345.2	1312.8	1279.2	1210.4	1103.4	956.0
					CSwithDisconnect	Amps	3609.6	3535.2	3456	3376.8	3295.2	3211.2	3038.4	2769.6	2400
		Cusick	A-155	D09229	Disconnect / DISCMOD	MVA	1438.0	1408.4	1376.8	1345.2	1312.8	1279.2	1210.4	1103.4	956.0
						Amps	3609.6	3535.2	3456	3376.8	3295.2	3211.2	3038.4	2769.6	2400
		Cusick	A-162	D12040	Disconnect / DISCMOD	MVA	1792.0	1750.2	1707.4	1663.8	1619.4	1573.8	1479.6	1380.2	1274.8
						Amps	4498.56	4393.28	4286.08	4176.64	4064.96	3950.72	3714.24	3464.64	3200
		Usk	N/A	Str 41/3-Str 45/4	OTF_StructuresAndLines / Chukar	MVA	896.3	876.4	856.5	836.6	816.7	792.8	745.0	697.2	697.2
					Criukai	Amps	2250	2200	2150	2100	2050	1990	1870	1750	1750
		Usk	N/A	Str 45/4-Boundary	OTF_StructuresAndLines / Jefferson	MVA	872.4	844.5	816.7	788.8	756.9	721.1	649.3	569.7	569.7
					Jellerson	Amps	2190	2120	2050	1980	1900	1810	1630	1430	1430
		Boundary	A-1235 MB	D11019	Disconnect / DISCGroupOperated	MVA	958.6	938.9	917.8	896.8	875.1	852.8	806.9	735.6	637.4
						Amps	2406.4	2356.8	2304	2251.2	2196.8	2140.8	2025.6	1846.4	1600
		Boundary	A-1235	O02714	Circuit Breakers / BKRGasPufferHydraulic	MVA	1081.2	1058.1	1034.2	1010.3	985.6	960.1	908.3	854.1	796.7
						Amps	2714	2656	2596	2536	2474	2410	2280	2144	2000
		Boundary	A-1235 LS	D11020	Disconnect / DISCGroupOperated	MVA	958.6	938.9	917.8	896.8	875.1	852.8	806.9	735.6	637.4
					Discoloupoperated	Amps	2406.4	2356.8	2304	2251.2	2196.8	2140.8	2025.6	1846.4	1600
		Boundary	A-1235 AB D11018	Disconnect / DISCGroupOperated	MVA	958.6	938.9	917.8	896.8	875.1	852.8	806.9	735.6	637.4	
					DISCGroupOperated	Amps	2406.4	2356.8	2304	2251.2	2196.8	2140.8	2025.6	1846.4	1600
Usk-Pine Street	Yes	Usk	Pend Oreille	Pend Oreille PUD PU6652 Circuit Breaker 1	Circuit Breakers / PU6652	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
115kV line			PUD			Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk Pend Oreille		Pend Oreille PUD PP6652	Circuit Breakers / PP6652	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 2		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6752	Circuit Breakers / PP6752	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 3		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6852	Circuit Breakers / PP6852	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 4		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6952	Circuit Breakers / PP6952	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 5		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PU6651	Disconnect / PU6651	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Disconnect 1		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6951	Disconnect / PP6951	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Disconnect 10		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6953	Disconnect / PP6953	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Disconnect 11		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200

BPA Facility Ratings Report Baseline Date 9/9/2021 3:57:33 PM

										Paral	lel Emerge	ncy			
Facility Name	ТОР	Substation	Position	Equipment ID	Type / Category		-15	-10	-5	0	5	10	20	30	40
University (EWEB)-	Yes	University (EWEB)	EWEB	EWEB WILLAMET-UNIV 7070	Circuit Breakers / 7070	Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
Willamette 115kV ine		University (EWEB)	EWEB	EWEB WILLAMET-UNIV 7060	Circuit Breakers / 7060	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
iiie				Circuit Breaker 2		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV 6050	Circuit Breakers / 6050	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
				Circuit Breaker 3		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV 6060	Circuit Breakers / 6060	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
				Circuit Breaker 4		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV	Disconnect / MOD7073	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
				MOD7073 Disconnect 1		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV	Disconnect / MOD7071	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
				MOD7071 Disconnect 2		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD7063 Disconnect 3	Disconnect / MOD7063	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB) EWEB	EWEB WILLAMET-UNIV	Disconnect / MOD7061	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	
				MOD7061 Disconnect 4		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV	Disconnect / MOD6063	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
				MOD6063 Disconnect 5		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6049 Disconnect 6	Disconnect / MOD6049	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV	Disconnect / MOD6051	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
				MOD6051 Disconnect 7		Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6053 Disconnect 8	Disconnect / MOD6053	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
		University (EWEB)	EWEB	EWEB WILLAMET-UNIV MOD6061 Disconnect 9	Disconnect / MOD6061	MVA	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
						Amps	2000	2000	2000	2000	2000	2000	2000	2000	2000
Usk-Boundary No 1	No	Usk	A-951	D11865	Disconnect /	MVA	2444.4	2377.4	2309.0	2238.8	2167.2	2092.2	1937.6	1772.0	1593.4
230kV line					DISCGroupOperated	Amps	6136	5968	5796	5620	5440	5252	4864	4448	4000
		Usk	A-952	D11866	Disconnect /	MVA	3022.2	2958.8	2894.0	2827.8	2760.0	2690.4	2545.8	2392.2	2228.2
					DISCGroupOperated	Amps	7586.4	7427.2	7264.8	7098.4	6928	6753.6	6390.4	6004.8	5593.2
		Usk	A-953	O02729	Circuit Breakers /	MVA	2444.4	2377.4	2309.0	2238.8	2167.2	2092.2	1937.6	1772.0	1593.4
					BKRGasPufferAir	Amps	6136	5968	5796	5620	5440	5252	4864	4448	4000
		Usk	A-954	D11867	Disconnect /	MVA	2444.4	2377.4	2309.0	2238.8	2167.2	2092.2	1937.6	1772.0	1593.4
					DISCGroupOperated	Amps	6136	5968	5796	5620	5440	5252	4864	4448	4000
		Usk	A-955	O02730	Circuit Breakers /	MVA	2444.4	2377.4	2309.0	2238.8	2167.2	2092.2	1937.6	1772.0	1593.4
					BKRGasPufferAir	Amps	6136	5968	5796	5620	5440	5252	4864	4448	4000
		Usk	A-956	D11864	Disconnect /	MVA	2444.4	2377.4	2309.0	2238.8	2167.2	2092.2	1937.6	1772.0	1593.4
					DISCGroupOperated	Amps	6136	5968	5796	5620	5440	5252	4864	4448	4000

										Para	llel Emerge	ency			
Facility Name	ТОР	Substation	Position	Equipment ID	Type / Category		-15	-10	-5	0	5	10	20	30	40
Usk-Boundary No 1	No	Usk	N/A	Str 7/1-Cusick	OTF_StructuresAndLines /	MVA	733.0	717.1	701.1	685.2	669.3	649.3	609.5	569.7	569.7
230kV line					Pheasant	Amps	1840	1800	1760	1720	1680	1630	1530	1430	1430
		Usk	N/A	Usk-Str 7/1	OTF_StructuresAndLines /	MVA	729.0	713.1	697.2	677.2	661.3	645.4	605.5	565.7	565.7
					Bittern	Amps	1830	1790	1750	1700	1660	1620	1520	1420	1420
		Usk	N/A	Cusick-Str 41/3	OTF_StructuresAndLines / Pheasant	MVA	733.0	717.1	701.1	685.2	669.3	649.3	609.5	569.7	569.7
						Amps	1840	1800	1760	1720	1680	1630	1530	1430	1430
		Cusick	A-153	ID0177	Circuit Switcher /	MVA	2215.0	2159.2	2102.0	2043.6	1983.8	1922.6	1795.2	1660.0	1515.4
					CSwithDisconnect	Amps	5560.32	5420.16	5276.48	5129.92	4979.84	4826.24	4506.24	4166.72	3803.84
		Cusick	A-154	ID0178	Circuit Switcher /	MVA	1813.4	1775.2	1736.4	1696.6	1656.0	1614.2	1527.4	1435.2	1337.0
					CSwithDisconnect	Amps	4551.84	4456.32	4358.88	4259.04	4156.8	4052.16	3834.24	3602.88	3355.92
		Cusick	A-155	D09229	Disconnect / DISCMOD	MVA	1813.4	1775.2	1736.4	1696.6	1656.0	1614.2	1527.4	1435.2	1337.0
						Amps	4551.84	4456.32	4358.88	4259.04	4156.8	4052.16	3834.24	3602.88	3355.92
		Cusick	A-162	D12040	Disconnect / DISCMOD	MVA	2215.0	2159.2	2102.0	2043.6	1983.8	1922.6	1795.2	1660.0	1515.4
						Amps	5560.32	5420.16	5276.48	5129.92	4979.84	4826.24	4506.24	4166.72	3803.84
		Usk	N/A	Str 41/3-Str 45/4	OTF_StructuresAndLines /	MVA	896.3	876.4	856.5	836.6	816.7	792.8	745.0	697.2	697.2
					Chukar	Amps	2250	2200	2150	2100	2050	1990	1870	1750	1750
		Usk	N/A	Str 45/4-Boundary	OTF_StructuresAndLines / Jefferson	MVA	872.4	844.5	816.7	788.8	756.9	721.1	649.3	569.7	569.7
						Amps	2190	2120	2050	1980	1900	1810	1630	1430	1430
		Boundary A-1235	A-1235 MB	D11019	Disconnect /	MVA	1208.9	1183.5	1157.6	1131.1	1104.0	1076.2	1018.3	956.9	891.3
					DISCGroupOperated	Amps	3034.56	2970.88	2905.92	2839.36	2771.2	2701.44	2556.16	2401.92	2237.28
		Boundary	A-1235	O02714	Circuit Breakers /	MVA	1222.2	1188.7	1154.5	1119.4	1083.6	1046.1	968.8	886.0	796.7
					BKRGasPufferHydraulic	Amps	3068	2984	2898	2810	2720	2626	2432	2224	2000
		Boundary	A-1235 LS	D11020	Disconnect /	MVA	1208.9	1183.5	1157.6	1131.1	1104.0	1076.2	1018.3	956.9	891.3
					DISCGroupOperated	Amps	3034.56	2970.88	2905.92	2839.36	2771.2	2701.44	2556.16	2401.92	2237.28
		Boundary	A-1235 AB	D11018	Disconnect /	MVA	1208.9	1183.5	1157.6	1131.1	1104.0	1076.2	1018.3	956.9	891.3
					DISCGroupOperated	Amps	3034.56	2970.88	2905.92	2839.36	2771.2	2701.44	2556.16	2401.92	2237.28
Usk-Pine Street	Yes	Usk	Pend Oreille	Pend Oreille PUD PU6652	Circuit Breakers / PU6652	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
115kV line			PUD	Circuit Breaker 1		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6652	Circuit Breakers / PP6652	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 2		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6752	Circuit Breakers / PP6752	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 3		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6852	Circuit Breakers / PP6852	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 4		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille	Pend Oreille PUD PP6952	Circuit Breakers / PP6952	MVA	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
			PUD	Circuit Breaker 5		Amps	1200	1200	1200	1200	1200	1200	1200	1200	1200
		Usk	Pend Oreille PUD	Pend Oreille PUD PU6651 Disconnect 1	Disconnect / PU6651	MVA	336.6	336.6	336.6	336.6	336.6	336.6	308.7	275.9	239.0