Revenue Requirements
Follow-up Discussion

Oct. 3, 2018
BPA Rates Hearing Room
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic and Presenters</th>
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</thead>
<tbody>
<tr>
<td>9:00 a.m.</td>
<td>Introductions</td>
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<tr>
<td>9:15 a.m.</td>
<td>New depreciation study</td>
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<tr>
<td>9:50 a.m.</td>
<td>I-5 Reinforcement Project (South of Allston) regulatory asset decision</td>
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<tr>
<td>10:25 a.m.</td>
<td>Transmission financial reserves</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>Conclude</td>
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New Depreciation Study

Veronica Wittig and Lornida Limpf
What is a depreciation study?

A comparison of book reserve with calculated accrued depreciation
Why do a study?

- Depreciation expense is an estimate used in accounting to reflect the decrease in value of the corresponding assets. BPA’s revenue requirement is designed to recover depreciation expense from customers.

- Depreciation rates are influenced by factors such as technological changes and maintenance policies.

- The last BPA depreciation study was performed in FY 2011-2012 using data through Sept. 30, 2010.
## Depreciation results

### COMPARISON OF DEPRECIATION EXPENSE AND ANNUAL ACCRUAL RATES

**AS OF SEPTEMBER 30, 2016**

<table>
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<tr>
<th>ACCOUNT</th>
<th>2010 STUDY</th>
<th>2016 STUDY</th>
<th>INCREASE/DECREASE</th>
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<td>PROFORMA</td>
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Major drivers for the increase

- Inflation and increasing cost of removal for long-lived assets.

- Capital investment growth.
## Comparison of Net Salvage
### As of September 30, 2016

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I-5 Reinforcement Project (South of Allston) Regulatory Asset Decision

Mark Korsness and Alex Lennox
I-5 Corridor Reinforcement Project

Overview

• New 80 Mile 500kV transmission line and 2 new substations
• Castle Rock, WA to Troutdale, OR
I-5 Corridor Reinforcement Timeline

• 1970’s
  – The need to build the line was first identified
I-5 Corridor Reinforcement Timeline

• 2008
  – Transmission planning studies reconfirmed the need in 10-year planning horizon.
I-5 Corridor Reinforcement Timeline

• 2009
  – Launched Project
  – Assembled Project Team
  – Developed initial routes, survey, field studies
  – Announced and involved the public, 10,000 addresses
  – NEPA
Bonneville Power Administration

I-5 Corridor Reinforcement Project
Alternatives and Options - May 2011

- BPA will consider these four alternatives and options in the draft EIS.
- The environmental analysis will compare impacts from the alternatives and options.
- No alternative or option is preferred over another.
- No route segments have been eliminated.
- This map and more detailed maps of the alternatives are available online at www.bpa.gov/ groin.

LEGEND
(Assignment and interpretation may conflict in detail)
- Substations
- Substation Sites
- Alternatives
- Alternative A
- Alternative B
- Alternative C
- Alternative D
- Alternative E
- Alternative F
- Alternative G
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- Alternative J
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- Alternative SSSS
- Alternative TTTT
- Alternative UUUU
- Alternative VVVV
- Alternative WWVV
- Alternative XXXX
- Alternative YYYY
- Alternative ZZZZ
- Alternative AAAA
- Alternative BBBB
- Alternative CCCC
- Alternative DDDD
- Alternative EEEE
- Alternative FFFF
- Alternative GGGG
- Alternative HHHH
- Alternative IIIE
- Alternative JJJJ
- Alternative KKKK
- Alternative LLLL
- Alternative MMMM
- Alternative NNNN
- Alternative OOOO
- Alternative PPPP
- Alternative QQQQ
- Alternative RRRR
- Alternative SSSS
- Alternative TTTT
- Alternative UUUU
- Alternative VVVV
- Alternative WWVV
- Alternative XXXX
- Alternative YYYY
- Alternative ZZZZ
- Alternative AAAA
- Alternative BBBB
- Alternative CCCC
- Alternative DDDD
- Alternative EEEE
- Alternative FFFF
- Alternative GGGG
- Alternative HHHH
- Alternative IIIE
- Alternative JJJJ
- Alternative KKKK
- Alternate
I-5 Corridor Reinforcement Timeline

• 2012
  – November 2012, BPA released a draft EIS for public review and comment
  – 16 line route possibilities
  – Identified preferred alternative
    • Central Alternative using Central Option 1
  – Public, elected officials, local and federal agencies
I-5 Corridor Reinforcement Timeline

• 2013
  – Extended comment period for the Draft EIS
  – 3,000 comments on the Draft EIS
  – 7,000 comments during the scoping
  – Worked with land owners to improve design to reduce project impacts
I-5 Corridor Reinforcement Timeline

• 2016
  – In February of 2016, BPA released the final EIS.
    • 6,500 Pages
I-5 Corridor Reinforcement Timeline

• 2017
  – In May 2017 completed an extensive review, update, and analysis of the need for the Project.
  – Decided not to build.
• BPA spent $130.013 million on the I-5 Corridor Reinforcement Project.
• The Administrator chose to recover the cost over time starting with the BP-20 rate case, amortizing the spending over a 5 year period. This results in an annual expense of $26 million.
• The 5 year amortization period is consistent with the expected life of the studies and planning activities on which the funds were spent. These activities have a relatively short useful life.
• The 5 year amortization period also directly supports BPA’s strategic and financial plans as well as the leverage policy.
  – Every dollar of amortization is used to pay down debt which incrementally improves the Transmission debt-to-asset ratio.
  – Lengthening the amortization period would increase the ratio and likely would result in a corresponding increase in revenue financing. As a result, the revenue requirement in total would not change.
Transmission Financial Reserves

Cheryl Hargin and Melike Kayim
Main Drivers

- In FY 2017, net increase in reserves relative to BP-16 was $28 million.
- Net revenues were $7 million higher than BP-16.
- Depreciation and amortization came out $7 million higher than expected.
- Reserves financing funds of $15 million was used to pay off high-interest appropriations for interest savings.
- LGIA credits were $5 million higher than BP-16 projections.
- As of the end-of-year, cash balance was $32 million higher due to bills that were due in FY 2018. Now BPA is modeling accounts receivable/payable balances into reserve forecast for more accurate calculation of financial reserves for risk and to eliminate end-of-year forecast volatility.
### FY 2018 forecast to BP-18 crosswalk

#### Main Drivers
- In FY 2018, net expected increase in reserves relative to BP-18 is $82 million.
- Net revenues are $15 million higher than BP-18.
- Depreciation and amortization is $19 million higher than expected due to the new depreciation study.
- Reserves financing funds of $15 million was used to pay off high-interest appropriations for interest savings.
- BPA received $5 million from the Calpine settlement.
- A $20 million payment was made for a transformer that was purchased last year.

<table>
<thead>
<tr>
<th>TRANSMISSION</th>
<th>FY2018 RC</th>
<th>FY2018 Q3 Forecast</th>
<th>Delta Q3 - RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOY RESERVES for RISK (in $millions)</td>
<td>$402</td>
<td>$463</td>
<td>$61</td>
</tr>
<tr>
<td>Net Revenues</td>
<td>$13</td>
<td>$28</td>
<td>$15</td>
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<tr>
<td>Non-Cash Expenses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve Financing</td>
<td>($15)</td>
<td>($15)</td>
<td></td>
</tr>
<tr>
<td>Depreciation and Amortization</td>
<td>$273</td>
<td>$292</td>
<td>$19</td>
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<tr>
<td>Transmission Credit Projects Net Interest</td>
<td>$4</td>
<td>$4</td>
<td></td>
</tr>
<tr>
<td>Amortization of Capitalized Bond Premium</td>
<td>$1</td>
<td>$1</td>
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<tr>
<td>Capitalization Adjustment</td>
<td>($19)</td>
<td>($19)</td>
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<tr>
<td>Total</td>
<td>$244</td>
<td>$263</td>
<td>$19</td>
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<tr>
<td>Non-Cash Revenues / Accruals</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LGIA</td>
<td>($17)</td>
<td>($17)</td>
<td></td>
</tr>
<tr>
<td>AC Intertie CO/Fiber</td>
<td>($9)</td>
<td>($9)</td>
<td></td>
</tr>
<tr>
<td>Debt Repayment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayment of Treasury Principal (Bonds + Appropriations)</td>
<td>($48)</td>
<td>($48)</td>
<td></td>
</tr>
<tr>
<td>Repayment of Capital Leases</td>
<td>($2)</td>
<td>($2)</td>
<td></td>
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<tr>
<td>Debt Service Reassignment Principal</td>
<td>($192)</td>
<td>($192)</td>
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<tr>
<td>Total</td>
<td>($268)</td>
<td>($268)</td>
<td>($0)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Calpine Settlement</td>
<td>$5</td>
<td>$5</td>
<td></td>
</tr>
<tr>
<td>Catliness Settlement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Payment for Previous Year’s Transformer Purchase</td>
<td>($20)</td>
<td>($20)</td>
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<tr>
<td>Annual Cash Surplus</td>
<td>$2</td>
<td>($2)</td>
<td></td>
</tr>
<tr>
<td>Cash Flow Adjustment</td>
<td>($4)</td>
<td>$4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>($2)</td>
<td>($15)</td>
<td>($13)</td>
</tr>
<tr>
<td>NET CHANGE</td>
<td>($12)</td>
<td>$9</td>
<td>$21</td>
</tr>
<tr>
<td>EOY RESERVES for RISK (in $millions)</td>
<td>$390</td>
<td>$472</td>
<td>$82</td>
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</tbody>
</table>
# BONNEVILLE POWER ADMINISTRATION

**Report ID:** 0023FY18  
**Requesting BL:** TRANSMISSION BUSINESS UNIT  
**Unit of Measure:** $ Thousands  
**Data Source:** PFMS  
**% of Year Elapsed:** 75%

## QBR Forecast Analysis: Transmission Services

**Run Date/Time:** July 17, 2018 / 03:41  
**Through the Month Ended June 30, 2018**  
**Preliminary/ Unaudited**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY 2018</td>
<td>Current EOY Forecast</td>
<td>Current EOY Forecast - Rate Case</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Sales</td>
<td>$893,151</td>
<td>$911,011</td>
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<tr>
<td>Miscellaneous Revenues</td>
<td>41,183</td>
<td>40,734</td>
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<tr>
<td>Inter-Business Unit Revenues</td>
<td>117,982</td>
<td>126,333</td>
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<tr>
<td><strong>Total Operating Revenues</strong></td>
<td>1,052,316</td>
<td>1,078,077</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Expenses</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2018</td>
<td>Rate Case</td>
<td>Current EOY Forecast - Rate Case</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Transmission Operations</td>
<td>167,050</td>
<td>156,942</td>
</tr>
<tr>
<td>Transmission Maintenance</td>
<td>176,580</td>
<td>172,767</td>
</tr>
<tr>
<td>Transmission Engineering</td>
<td>56,351</td>
<td>51,973</td>
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<tr>
<td>Trans Services Transmission Acquisition and Ancillary Services</td>
<td>119,461</td>
<td>131,743</td>
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<tr>
<td>Transmission Reimbursables</td>
<td>9,929</td>
<td>11,623</td>
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<tr>
<td>BPA Internal Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Income, Expenses &amp; Adjustments</td>
<td>(7,548)</td>
<td>()</td>
</tr>
<tr>
<td>Depreciation &amp; Amortization</td>
<td>278,958</td>
<td>292,442</td>
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<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>894,721</td>
<td>907,924</td>
</tr>
</tbody>
</table>

| **Net Operating Revenues (Expenses)** | 157,596 | 170,154 | 12,558 |

<table>
<thead>
<tr>
<th>Interest Expense and (Income)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Expense</td>
<td>176,449</td>
<td>162,816</td>
</tr>
<tr>
<td>AFUDC</td>
<td>(24,733)</td>
<td>(16,500)</td>
</tr>
<tr>
<td>Interest Income</td>
<td>(3,497)</td>
<td>(4,573)</td>
</tr>
<tr>
<td><strong>Net Interest Expense (Income)</strong></td>
<td>148,219</td>
<td>141,743</td>
</tr>
</tbody>
</table>

| **Net Revenues (Expenses)** | $9,377 | $28,410 | $19,034 |

---

October 3, 2018  
Predecisional, For Discussion Purposes Only
Transmission Services QBR Forecast Analysis: Explanation of Changes

**Row 4 – Total Operating Revenues:** Increased $26 million due to higher Ancillary services, and increased revenues for NT load and oversupply revenues.

**Row 5 – 7 - Transmission Operations, Maintenance, and Engineering:** Decreased $18 million reflecting reductions taken in Q2 to help meet BPA’s cost management objective. The reductions are consistent with historical budget execution and spending trends. Transmission’s Q3 forecast remains unchanged from the Q2 forecast.

**Row 8 – Transmission Acquisition and Ancillary Services:** Increased $12 million reflecting adding oversupply expense incurred to date and Energy/Generation Imbalance which was not included in Rate Case but is added in the current year to reflect the latest forecast of generator departures from the BPA’s Balancing Authority, and the inclusion of contingent energy deliveries.

**Row 11 – Agency Services G&A:** Decreased $4 million due to the Corporate reductions taken in Q2 which are allocated to Transmission. These reductions were offset slightly by higher post retirement benefits.

**Row 12 - Other Income, Expenses and Adjustments:** Increased $7 million due to assigning the undistributed reduction to rows 5, 6 and 7 at the start of the year.

**Row 13 – Depreciation Expense:** Depreciation increased $13 million to reflect the updated depreciation study with adjustments for year-to-date performance.

**Row 19 - Net interest Expense:** Decreased $6 million due to lower lease financing interest.
## BONNEVILLE POWER ADMINISTRATION

### QBR Forecast Analysis: Transmission Services

**Through the Month Ended September 30, 2017**

**Run Date/Time:** October 30, 2017/05:51

**Data Source:** EPM Data Warehouse

**% of Year Elapsed:** 100%

<table>
<thead>
<tr>
<th>Filled</th>
<th>FY 2017</th>
<th>FY 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td><strong>B</strong></td>
<td><strong>C</strong></td>
</tr>
<tr>
<td><strong>Operating Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Case</td>
<td>Actuals: FYTD</td>
<td>EOH Actuals - Rate Case</td>
</tr>
<tr>
<td>Sales</td>
<td>$ 943,997</td>
<td>$ 922,108</td>
</tr>
<tr>
<td>Miscellaneous Revenues</td>
<td>39,154</td>
<td>41,491</td>
</tr>
<tr>
<td>Inter-Business Unit Revenues</td>
<td>117,591</td>
<td>128,126</td>
</tr>
<tr>
<td><strong>Total Operating Revenues</strong></td>
<td><strong>1,100,742</strong></td>
<td><strong>1,091,725</strong></td>
</tr>
</tbody>
</table>

| **Operating Expenses** |         |         |
| Rate Case | Actuals: FYTD | EOH Actuals - Rate Case |
| Transmission Operations | $ 160,800 | $ 144,518 | $ (16,282) |
| Transmission Maintenance | 104,272 | 109,929 | 5,657 |
| Transmission Engineering | 54,915 | 53,240 | (1,675) |
| Trans Services Transmission Acquisition and Ancillary Services | 140,782 | 140,914 | 131 |
| Transmission Reimbursables | 9,735 | 15,646 | 5,912 |
| BPA Internal Support |         |         |
| Additional Post-Retirement Contribution | 19,748 | 13,920 | (5,828) |
| Agency Services G&A | 64,775 | 66,724 | 1,949 |
| Other Income, Expenses & Adjustments | (2,100) | (1,045) | 1,055 |
| Depreciation & Amortization | 259,548 | 260,927 | 1,379 |
| **Total Operating Expenses** | **872,475** | **861,773** | **(10,702)** |

| **Net Operating Revenues (Expenses)** |         |         |
| Rate Case | Actuals: FYTD | EOH Actuals - Rate Case |
| $ 228,267 | $ 229,952 | $ 1,685 |

| **Interest Expense and (Income)** |         |         |
| Interest Expense | $ 205,969 | $ 164,121 | (41,848) |
| AFUDC | (41,346) | (21,577) | 19,769 |
| Interest Income | (16,310) | (3,045) | 13,265 |
| **Net Interest Expense (Income)** | $ 148,313 | $ 139,499 | (8,814) |

| **Net Revenues (Expenses)** |         |         |
| Rate Case | Actuals: FYTD | EOH Actuals - Rate Case |
| $ 79,954 | $ 90,453 | $ 10,499 |
**Transmission Services QBR Forecast Analysis: FY 17 Explanation of Changes**

**Row 4 – Total Operating Revenues:** $9 million below what was assumed in rate case due to 600 MW of Point-to-point Long term conditional firm service that did not materialize in FY17.

**Row 5 - Transmission Operations:** $16 million below what was assumed in rate case which included Puget Sound Area Northern Intertie work, but the bulk of this work did not occur in FY17. BPA only incurs cost for this work once we are billed. Cost management actions, reductions taken in travel and training, and lower personnel costs due to hiring constraints was also a driver for the under spend.

**Row 10 – Additional Post Retirement Contribution:** $6 million below what was assumed in rate case due to implementing OPM's methodology for calculating the employer contribution rates in FY17.

**Row 19 - Net interest Expense:** $9 million below what was assumed in the rate case due to issuing less Treasury Borrowing debt.
Didn’t get your question answered? Please email Communications@bpa.gov. Answers will be posted to www.bpa.gov/goto/financialoverview.
FINANCIAL DISCLOSURE

This information was publicly available on Oct. 1, 2018, and contains information sourced and not sourced directly from BPA financial statements.