INTRODUCTION
Scott Simms, DIRECTOR OF COMMUNICATIONS
## AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
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</thead>
</table>
| 9:00 – 9:02 | Introductions                                    | Scott Simms  
*Director of Communications* |
| 9:02 – 9:20 | State of the business:  
• Grid modernization  
• Environment, Fish and Wildlife updates | Elliot Mainzer  
*Administrator* |
| 9:20 – 9:30 | Finance update                                  | Mary Hawken  
*Acting chief financial officer* |
| 9:30 – 9:40 | Power Services update                           | Joel Cook  
*Senior VP of Power Services* |
| 9:40 – 9:50 | Transmission Services update                    | Richard Shaheen  
*Senior VP of Transmission Services* |
| 9:50 – 9:51 | Upcoming involvement opportunities              | Scott Simms                                  |
| 9:51 – 10:00 | Question and answer session                     |                                              |
Incident frequency rate
Number of injuries and illnesses per 200,000 hours worked

- 2018
- Ceiling

--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
0.4 | 0.9 | 1 | 1 | 1 | 1.1 | 1 | 1.2 | 1.5

0.5 | 1 | 1.5
Modernizing BPA’s assets and operations is a critical element of our 2018-23 Strategic Plan and will help increase competitiveness and customer responsiveness.

- Increase power and transmission revenues.
- Reduce long-term transmission costs by potentially decreasing or delaying the need for system expansion.

We will enhance system operations in three major ways: automation, accuracy and visibility.

Sustained investment of $25 million per rate period through 2021.
• One outcome of grid modernization – the potential to join the Western EIM.
• BPA is exploring how and under what conditions it could participate in the EIM operated by the CAISO.
• Initial cost-benefit analysis:
  – Assumed start-up cost of $35 million.
  – Annual benefit to Power Services of $14 million.
• BPA is committed to transparency and customer engagement in working towards a decision on whether to join the market.
• BPA is engaging in related efforts to protect NW interests and support developments that could improve secondary revenues.
  – Day-ahead capacity product: CAISO’s proposal for day-ahead market enhancements includes an imbalance reserve product.
  – Intertie optimization: CAISO and others are studying ways to increase dynamic transfer capability and capacity of the AC and DC interties.
• On April 2, the 9th U.S. Circuit Court of Appeals upheld the 2018 spill injunction. BPA will be implementing a spill surcharge in FY 2018.

• The spill surcharge will adjust power rates to recover the non-Slice portion of the cost associated with increased spill and lost generation relative to the spill assumptions used when setting rates.
Next week BPA will share:

- Preliminary data and assumptions used to calculate the surcharge.
- Information will include proposed program spending reductions to help offset the spill surcharge.

Rates staff will review these materials at a workshop on May 16 at 1 p.m.
• Columbia Basin Fish Accords signed in 2008.
  – Signed by action agencies, states and tribes.
  – To date, partners have restored more than 8,000 acres of estuary floodplain and reopened nearly 4,000 miles of spawning grounds.
• Fish Accords are set to expire in September 2018.
• BPA actively exploring post-2018 path forward on Fish Accords.
• Consideration for Fish Accords extension is the 2018-2023 Strategic Plan commitment:
  – BPA intends to manage its fish and wildlife program costs at or below the rate of inflation, inclusive of any new obligations that may emerge from litigation or subsequent commitments in current or future biological opinions.

• As BPA further explores potential Fish Accords extension, additional outreach will occur with customers and regional stakeholders.
FINANCE
Mary Hawken, ACTING CHIEF FINANCIAL OFFICER
FCRPS net revenues
In millions of dollars

- BP-18 Rate Case
- Q2 Forecast

$361

$26
Federal Columbia River Power System
Total revenue and expense in millions of dollars

BP-18 Rate Case  Q2 Forecast

Total expense
- $3,627
- $3,300

Total revenue
- $3,653
- $3,661
Historical agency underspend
Total program expense in millions of dollars
- Start-of-year budget
- Actuals
- FY 2018 budget true up
Cost-management objective escalation alternative
Total program expense in millions of dollars

FY Target (BP-20 path)  Rate period target

FY 2017 actuals  FY 2018  FY 2019  FY 2020  FY 2021  FY 2022  FY 2023
• Conducted depreciation study update using data through FY 2016.
• The largest change is due to increased costs associated with removing assets.
• New depreciation rates went into effect March 2018.
## DAYS CASH ON HAND

<table>
<thead>
<tr>
<th></th>
<th>BP-18 Rate Case</th>
<th>FY 2018 EOY forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOY Reserves</td>
<td>170</td>
<td>468</td>
</tr>
<tr>
<td>Reserves not for risk</td>
<td>149</td>
<td>63</td>
</tr>
<tr>
<td>Reserves available for risk</td>
<td>21</td>
<td>405</td>
</tr>
<tr>
<td>Days cash on hand</td>
<td>4</td>
<td>237</td>
</tr>
</tbody>
</table>

*Reserves in millions of dollars*
POWER SERVICES
Joel Cook, SENIOR VICE PRESIDENT OF POWER SERVICES
Power total expense
Total expenses in millions of dollars

<table>
<thead>
<tr>
<th></th>
<th>BP-18 Rate Case</th>
<th>Actuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.</td>
<td>166</td>
<td></td>
</tr>
<tr>
<td>Nov.</td>
<td>208</td>
<td></td>
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<tr>
<td>Dec.</td>
<td>211</td>
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<td>Jan.</td>
<td>213</td>
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<tr>
<td>Feb.</td>
<td>192</td>
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<tr>
<td>March</td>
<td>201</td>
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</tr>
</tbody>
</table>

Total expense (in millions of dollars)

<table>
<thead>
<tr>
<th></th>
<th>BP-18 Rate Case</th>
<th>Q2 EOY forecast</th>
<th>BP-18 year-to-date</th>
<th>Expenses year-to-date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept.</td>
<td>2,629</td>
<td>2,488</td>
<td>1,281</td>
<td>1,190</td>
</tr>
</tbody>
</table>

Power Services Expense
Power total revenues
Total revenues in millions of dollars

<table>
<thead>
<tr>
<th>Month</th>
<th>BP-18 Rate Case</th>
<th>Actuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.</td>
<td>211</td>
<td></td>
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<tr>
<td>Nov.</td>
<td>221</td>
<td></td>
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<tr>
<td>Dec.</td>
<td>242</td>
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<tr>
<td>Jan.</td>
<td>286</td>
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<tr>
<td>Feb.</td>
<td>269</td>
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<tr>
<td>March</td>
<td>262</td>
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<td>April</td>
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<td>May</td>
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<td>July</td>
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<tr>
<td>Aug.</td>
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<tr>
<td>Sept.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>BP-18 Rate Case</th>
<th>Q2 EOY forecast</th>
<th>BP-18 year-to-date</th>
<th>Revenues year-to-date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,827</td>
<td>2,841</td>
<td>1,449</td>
<td>1,491</td>
</tr>
</tbody>
</table>

Power total revenues
Total revenues in millions of dollars

- BP-18 Rate Case
- Actuals
Where does the water come from?
(as a percent of the annual runoff at The Dalles)
National Weather Service official water supply forecast as of April 9, 2018

<table>
<thead>
<tr>
<th>Jan. – July (million acre feet)</th>
<th>Percent average</th>
</tr>
</thead>
<tbody>
<tr>
<td>118.3</td>
<td>117</td>
</tr>
</tbody>
</table>

- **Bonneville Power Administration**
- Slide 24
- QBR May 2018
- Joel Cook

- The map shows snowpack conditions across various regions, with percentages indicating the water supply forecast compared to the average.
- Percentages range from 89% to 162%, with some locations exceeding 140%.

- The map includes key locations such as Seattle, Portland, Bonneville, Montana, Idaho, Oregon, Washington, and others.

- The Water Supply Forecast Table highlights the forecast for Jan. – July with 118.3 million acre feet, which is 117% of the average.
Henry Hub prices
In dollars per one million British thermal units

Variance from BP-18 Rate Case
In dollars per one million British thermal units

BP-18 avg.: $3.12
3/28 avg.: $2.92
Mid-C heavy load hour prices
In dollars per megawatt hour
- Actuals
- Forward market (ICE)
- BP-18 Rate Case

Variance from BP-18 Rate Case
In dollars per megawatt hour
- Actuals
- FY 2018 expected
Capital spend and TBD metric
Tracks capital expenditure and work completed to date

- Actual $ millions FYTD
- Remaining Forecast

$ millions
300

Oct. 14
Nov. 25
Dec. 43
Jan. 60
Feb. 77
March 92
April
May
June
July
Aug.
Sept.
200
100
0

Note: capital expenditure KPI includes only direct-funded federal hydropower capital.
Federal hydropower forced outage factor
Percentage of hours fed hydro projects are offline due to unplanned outages

- **FY 2018**
- **Target**

<table>
<thead>
<tr>
<th></th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>3.6</td>
<td>4.6</td>
<td></td>
<td></td>
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<tr>
<td>FY 2018</td>
<td></td>
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<tr>
<td>Target</td>
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<td>5.9</td>
<td>6</td>
</tr>
</tbody>
</table>

FY 2018 Target: 5.9

**Good** - Percentage of hours fed hydro projects are offline due to unplanned outages.
Columbia Generating Station availability factor
Percentage of time Columbia is available to serve demand

- FY 2018
- Target

Good

93.5
95.6
94
94
95
96

Q1
Q2
Q3
Q4
Transmission total expense

Total expense in millions of dollars

- BP-18 Rate Case
- Actuals

<table>
<thead>
<tr>
<th>Month</th>
<th>BP-18 Rate Case</th>
<th>Q2 EOY forecast</th>
<th>BP-18 year-to-date</th>
<th>Expenses year-to-date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>78</td>
<td>1,043</td>
<td></td>
<td></td>
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<tr>
<td>Nov</td>
<td>78</td>
<td>1,050</td>
<td></td>
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<tr>
<td>Dec</td>
<td>77</td>
<td>521</td>
<td></td>
<td></td>
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<tr>
<td>Jan</td>
<td>83</td>
<td></td>
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<tr>
<td>Feb</td>
<td>77</td>
<td></td>
<td></td>
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<tr>
<td>March</td>
<td>91</td>
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<td>April</td>
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Transmission total revenues

Total revenues in millions of dollars

- **BP-18 Rate Case**
- **Actuals**

<table>
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<tr>
<th>Month</th>
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<th>Revenues year-to-date</th>
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<tbody>
<tr>
<td>Oct.</td>
<td>85</td>
<td></td>
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<tr>
<td>Nov.</td>
<td>88</td>
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<tr>
<td>Dec.</td>
<td>89</td>
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<td>Jan.</td>
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<td>Feb.</td>
<td>92</td>
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<tr>
<td>March</td>
<td>99</td>
<td></td>
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<td>April</td>
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The table shows the transmission total revenues for each month, comparing the BP-18 Rate Case forecasts with the actual revenues, and the year-to-date totals for both the rate case and actuals.
Capital spend and units installed
Tracks capital expenditure and work completed to date

- Actual assets FYTD
- Remaining planned assets
- Actual $ millions FYTD
- Remaining Forecast

$ millions

Units


0  100  200  300  400  500  600

0  100  200  300  400  500  600
System average interruption frequency index
Tracks frequency of unplanned outages

- Low voltage (< 200kV)
- High voltage (>= 200kV)
- Low voltage warning level
- High voltage warning level

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Low Voltage (&lt; 200kV)</th>
<th>High Voltage (&gt;= 200kV)</th>
<th>Low Voltage Warning Level</th>
<th>High Voltage Warning Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>0.74</td>
<td>0.56</td>
<td>0.66</td>
<td>0.68</td>
</tr>
<tr>
<td>Q2</td>
<td>0.56</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>0.27</td>
<td>0.68</td>
<td></td>
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</tr>
<tr>
<td>Q4</td>
<td>0.22</td>
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</table>

Good
System average interruption duration index
Tracks duration of unplanned outages

- Low voltage (< 200kV)
- High voltage (>= 200kV)
- Low voltage warning level
- High voltage warning level

- Good
• Reliability coordination.
• Asset management.
• TC-20 (formerly Transmission tariff engagement and Pro Forma Gap Assessment).
• Evolving transmission demand.
PUBLIC PROCESSES

Scott Simms, DIRECTOR OF COMMUNICATIONS
• **May 9** – FY2020-21 Rate Period High Water Mark process workshop.

• **May 10** – Resource Program workshop.

• **May 15-16** – Efficiency Exchange Northwest 2018.

• **May 16** – Spill surcharge workshop.

• **May 22** – Strengthening financial health: capital financing workshop.

• **May 30** – Columbia River System Operation EIS public update webinar.

• **May 31** – TC-20 Tariff customer workshops.
  – Additional meetings: June 26, July 23, Aug. 21.

• **June 13** – South of Allston Bilateral Redispatch Pilot workshop.

• **June 18–22** – Integrated Program Review.
• **May 11** – Financial Reserves Policy and Leverage Policy.

• **May 24** – Bonneville Environmental Foundation agreement extension.
The next QBR is scheduled for July 31, 2018.

Strategic plan is available at www.bpa.gov/StrategicPlan.

Didn’t get your question answered? Email Communications@bpa.gov. Answers will be posted to www.bpa.gov/goto/QBR.
FINANCIAL DISCLOSURE

This information was publicly available on April 30, 2018, and contains information not sourced directly from BPA financial statements.