INTRODUCTION

Scott Simms, DIRECTOR OF COMMUNICATIONS
<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 a.m.</td>
<td>Introductions</td>
<td>Scott Simms</td>
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<tr>
<td></td>
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<td>Director of Communications</td>
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<tr>
<td>9:01 a.m.</td>
<td>State of the business:</td>
<td>Elliot Mainzer</td>
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<tr>
<td></td>
<td>• Environment, Fish and Wildlife updates</td>
<td>Administrator</td>
</tr>
<tr>
<td>9:20 a.m.</td>
<td>Power Services update</td>
<td>Joel Cook</td>
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<tr>
<td></td>
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<td>Senior VP of Power Services</td>
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<tr>
<td>9:28 a.m.</td>
<td>Transmission Services update</td>
<td>Richard Shaheen</td>
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<td>Senior VP of Transmission Services</td>
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<tr>
<td>9:36 a.m.</td>
<td>Finance update</td>
<td>Michelle Manary</td>
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<td>Chief financial officer</td>
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<tr>
<td>9:44 a.m.</td>
<td>Grid modernization update</td>
<td>Nita Zimmerman</td>
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<td></td>
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<td>Deputy executive VP of Business Transformation Office</td>
</tr>
<tr>
<td>9:51 a.m.</td>
<td>Upcoming involvement opportunities</td>
<td>Scott Simms</td>
</tr>
<tr>
<td>9:53 a.m.</td>
<td>Question and answer</td>
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</table>
STATE OF THE BUSINESS

Elliot Mainzer, ADMINISTRATOR AND CHIEF EXECUTIVE OFFICER
Incident frequency rate
Number of injuries and illnesses per 200,000 hours worked

2019
Ceiling

0 0.3 0.4 0.6 0.5 0.7

0 0.5 1 1.5
• Tests an innovative approach to fish survival while managing costs of hydro generation.
• In place while we complete the CRSO process.
• Resulted in increased coordination and collaboration between federal, state and tribal parties.
• Implementation has been relatively smooth.
• Coordination with the U.S. Army Corps of Engineers is positive.
  – Implementation of flexible spill at the project level has been very timely.
• Under the current streamflow and system conditions, flexible spill provides more of a day average energy benefit than a capacity benefit.
• Final details of 2020 flexible spill operations will be finalized with spill agreement parties no later than September 2019.
The spill surcharge adjusts power rates to recover the non-Slice portion of the cost associated with increased spill and resulting lost generation relative to the spill assumptions used when setting rates.

The FY 2019 spill surcharge assumes the flexible spill operations.
• The average 80-water year cost of additional spill for FY 2019 is lower than it was in FY 2018.
• BPA is proposing no spill surcharge. The cost will be offset through Fish and Wildlife cost reductions.
• Comment period closes May 2; final decision issued May 16.
POWER SERVICES

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

- BP-18 Rate Case
- Actuals

<table>
<thead>
<tr>
<th></th>
<th>Total expense (in millions of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BP-18 Rate Case</td>
</tr>
<tr>
<td>Year-to-date</td>
<td>1,321</td>
</tr>
<tr>
<td>FY 2019</td>
<td>2,690</td>
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<td>191</td>
<td>204</td>
<td>212</td>
<td>209</td>
<td>279</td>
<td>260</td>
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<td>240</td>
<td>230</td>
<td>219</td>
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Power Services total revenues
Total revenues in millions of dollars

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<td>220</td>
<td>236</td>
<td>250</td>
<td>266</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Total revenues (in millions of dollars)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>BP-18 Rate Case</td>
</tr>
<tr>
<td>Year-to-date</td>
<td>1,450</td>
</tr>
<tr>
<td>FY 2019</td>
<td>2,821</td>
</tr>
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</table>
National Weather Service official water supply forecast as of April 3, 2019

<table>
<thead>
<tr>
<th>Jan. – July (million acre feet)</th>
<th>Percent average</th>
</tr>
</thead>
<tbody>
<tr>
<td>84.1</td>
<td>84%</td>
</tr>
</tbody>
</table>

Percent average: 84%
Henry Hub prices
In dollars per one million British thermal units

- BP-18 Rate Case
- Actuals (S&P Global Platts)
- NYMEX 15-Day Avg (4/12/19)

BP-18 forecast: $3.00
FY 2019 average: $3.03
Mid-C heavy load hour prices
In dollars per megawatt hour

- BP-18 Rate Case
- Actuals
- Forward market (ICE)

*Flat Mid-C prices were used erroneously for the BP-18 Rate Case forecast at Q1. This has been corrected in Q2 to use heavy load hour prices. The flat prices averaged about $2 a MWh less than the corrected HLH prices.

BP-18 forecast: $24.87
FY 2019 average: $49.01
Capital expenditure for fiscal year 2019

In millions of dollars

- BP-18 Rate Case
- Actuals fiscal year-to-date

--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
13 | 30 | 46 | 61 | 78 | 94 | 0 | 100 | 200 | 300 | 400
Note: Power’s capital work plan completed includes only direct-funded federal hydropower capital projects and spending.
Federal hydropower forced outage factor
Percentage of hours fed hydro projects are offline due to unplanned outages

- FY 2019  - Target

- Q1  - Q2  - Q3  - Q4

Target: 5.9

Q1: 5.1
Q2: 4.7

Good
Columbia Generating Station availability factor
Percentage of time Columbia is available to serve demand

- FY 2019
- Target

<table>
<thead>
<tr>
<th>Quarter</th>
<th>FY 2019</th>
<th>Target</th>
</tr>
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<tbody>
<tr>
<td>Q1</td>
<td>100</td>
<td>98</td>
</tr>
<tr>
<td>Q2</td>
<td>100</td>
<td>96</td>
</tr>
<tr>
<td>Q3</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>Q4</td>
<td>92</td>
<td>92</td>
</tr>
</tbody>
</table>
Transmission Services 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 actuals/forecast</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>88</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Nov</td>
<td>82</td>
<td>82</td>
<td></td>
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<tr>
<td>Dec</td>
<td>82</td>
<td>82</td>
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<tr>
<td>Jan</td>
<td>82</td>
<td>82</td>
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<tr>
<td>Feb</td>
<td>82</td>
<td>82</td>
<td></td>
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<tr>
<td>March</td>
<td>92</td>
<td>82</td>
<td></td>
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<tr>
<td>April</td>
<td>92</td>
<td>82</td>
<td></td>
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<tr>
<td>May</td>
<td>92</td>
<td>82</td>
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<tr>
<td>June</td>
<td>92</td>
<td>82</td>
<td></td>
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<tr>
<td>July</td>
<td>92</td>
<td>82</td>
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<tr>
<td>August</td>
<td>92</td>
<td>82</td>
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<tr>
<td>September</td>
<td>92</td>
<td>82</td>
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</tbody>
</table>

**Total expense (in millions of dollars)**

- **Year-to-date**
  - BP-18 Rate Case: 523
  - Q2 actuals/forecast: 507
  - Variance: (16)
- **FY 2019**
  - BP-18 Rate Case: 1,067
  - Q2 actuals/forecast: 1,066
  - Variance: (2)
Transmission Services total revenues

Total revenues in millions of dollars

- BP-18 Rate Case
- Actuals

<table>
<thead>
<tr>
<th>Month</th>
<th>BP-18 Rate Case</th>
<th>Q2 actuals/forecast</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.</td>
<td>83</td>
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<td>Nov.</td>
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<td>Dec.</td>
<td>86</td>
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<td>Jan.</td>
<td>89</td>
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<td>Feb.</td>
<td>88</td>
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<td>March</td>
<td>91</td>
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<tr>
<td>April</td>
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<td>May</td>
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<td>June</td>
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<td>July</td>
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<td>Aug.</td>
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<tr>
<td>Sept.</td>
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FY 2019:

- Year-to-date: 528 (519) (9)
- Total revenues (in millions of dollars):
  - BP-18 Rate Case: 1,060
  - Q2 actuals/forecast: 1,058 (2)

Graph showing monthly transmission services total revenues from October to September.
Capital expenditure for fiscal year 2019
In millions of dollars
- BP-18 Rate Case
- Actuals fiscal year-to-date
Percent of capital work plan completed
The percentage of assets completed compared to budget spent

- Completed assets
- Budget spent
- Planned assets
- Planned budget

- Q1: 67% completed, 71% budget spent
- Q2: 136% completed, 72% budget spent
- Q3:
- Q4: 100% completed, 100% budget spent
System average interruption frequency index
Tracks frequency of unplanned outages

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

0.43
0.43
0.2
0.26
0.62
0.59
0.6
0.4
0.2
0.8
0
0.2
0.4
0.6
0.8

Q1 Q2 Q3 Q4

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

Q1 | Q2 | Q3 | Q4
---|---|---|---
130 | 206 | 433 | 347
194 | 206 | 433 | 347
• Winter storm.
• Reliability coordinator services.
• TC-20 Record of Decision signed March 1.
$76 million more than expected POWER EXPENSES*

$2 million less than expected TRANSMISSION EXPENSES

$16 million less than expected POWER REVENUES

$2 million less than expected TRANSMISSION REVENUES

*Note: Power’s expenses exclude the $159 million expense reduction due to Regional Cooperation Debt refinancing
Federal Columbia River Power System
Total expense and revenues in millions of dollars

- BP-18 Rate Case
- Q2 EOY Forecast

Expenses:
- Non-IPR: $1,647
- IPR: $1,891
- Total: $3,538

Revenues:
- Non-IPR: $1,642
- IPR: $1,825
- Total: $3,467

Total expense and revenues in millions of dollars: $3,538 and $3,467
### FCRPS net revenues

In millions of dollars

- BP-18 Rate Case
- Q2 EOY Forecast

<table>
<thead>
<tr>
<th>BP-18 Rate Case</th>
<th>Q2 EOY Forecast</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>274</td>
<td>190</td>
<td>(84)</td>
</tr>
</tbody>
</table>

#### Agency net revenues less Regional Cooperation Debt transactions (in millions of dollars)

- **Agency net revenues**
- **In millions of dollars**
- **BP-18 Rate Case**
- **Q2 EOY Forecast**
- **Variance**

- **$120**
- **$190**

**Bar chart:***

- $120
- $190
• Financial reserves review:
  – Continuing to review all ten modules of the business unit split model.
  – Baker Tilly has started external review of work.
• Updated reserves available for risk and not for risk split.
  – More information available at May 3 finance workshop.
## DAYS CASH ON HAND

<table>
<thead>
<tr>
<th></th>
<th>BP-18 Rate Case</th>
<th>FY 2019 EOY forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total reserves</strong></td>
<td>140</td>
<td>409</td>
</tr>
<tr>
<td><em>Reserves not for risk</em></td>
<td>79</td>
<td>40</td>
</tr>
<tr>
<td><em>Reserves available for risk</em></td>
<td>61</td>
<td>369</td>
</tr>
<tr>
<td><strong>Days cash on hand</strong></td>
<td>12</td>
<td>220</td>
</tr>
</tbody>
</table>

*Reserves in millions of dollars*
Financial Reserves Policy thresholds and reserves for risk

In millions of dollars

- Cost recovery adjustment clause
- Surcharge
- No action
- Reserves distribution clause

- Agency: 495
- Power: 288
- Transmission: 207

- No modelling scenarios resulted in a Power RDC or CRAC or Transmission CRAC. The probability of a Transmission RDC is 2 percent. The probability of a Power FRP surcharge of some amount is 61 percent.
• New site-specific decommissioning study completed.
• Study will inform decommissioning trust funding decisions and accounting for BPA and Energy Northwest.
• Rate impact:
  – None for BP-20.
  – Further engagement planned ahead of the BP-22 Rate Case.
• More information available on May 3.
GRID MODERNIZATION

Nita Zimmerman, DEPUTY EXECUTIVE VICE PRESIDENT OF BUSINESS TRANSFORMATION OFFICE
Grid Modernization Key Strategic Initiative spending
In millions of dollars

- Incremental spent
- Existing spent
- Incremental planned
- Existing planned

Q1: Incremental spent 1.1, Existing spent 1.6
Q2: Incremental planned 5, Existing planned 2.3
Q3: Incremental spent 3.4, Existing spent 8.4
Q4: Incremental planned 15, Existing planned 4.5
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<tr>
<th>CY 2019</th>
<th>CY 2020</th>
<th>CY 2021</th>
<th>CY 2022</th>
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<tr>
<td>Pre-Rate Case Workshops</td>
<td>BP-22 Rate Case</td>
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<tr>
<td>Pre-TC-22 Workshops</td>
<td>TC-22 Tariff Change Process</td>
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**Policy Implementation Decisions**

**Grid Modernization Projects**
(includes Reliability Coordinator (RC) implementation by November 2019)

**EIM Implementation Projects**

**EIM Stakeholder Process**

- Monthly EIM Stakeholder mtgs
  - BPA Record of Decision for EIM Implementation Agreement
  - 30-day Public Comment on BPA Close-Out Letter
  - Final BPA Close-Out Letter
  - Customer EIM trainings begin, may need to go past Go Live date
  - EIM Go Live
  - CAISO Files EIM Entity Readiness Certificate at FERC

July: 30-day Public Comment - Letter to the Region
PUBLIC ENGAGEMENT

Scott Simms, DIRECTOR OF COMMUNICATIONS
• May 2: End-of-lease line reintegration projects.
• May 3: Finance workshop.
• May 15: Energy imbalance market stakeholder meeting.
• June 13: TC-20 implementation update.
• May 2: FY 2019 spill surcharge.
The next QBR is scheduled for July 30, 2019.

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

The strategic plan is available at www.bpa.gov/StrategicPlan.
FINANCIAL DISCLOSURE

This information was made publicly available on April 29, 2019, and contains information not sourced directly from BPA financial statements.