Long-Term Commercial Update
BPA Transmission Services

January 31, 2019
2018-19 Commercial Milestones

• Long-term ATC Methodology
  – Significant update to assumptions
  – Focus on South of Allston

• Commercial Assessment Update
  – Improved access for both PTP and NT
  – For NT load service, the majority of NT forecasts have been accommodated

• TSEP Update:
  – Updates on previously-studied (2016 and earlier) requests
  – 2019 Cluster Study Preview and Next Steps

• Conditional Firm Update
LONG-TERM ATC METHODOLOGY
Changed Assumptions for ATC Calculations in 2018

• ATC Base cases: 2023 & 2028 January, May, and August
  – Previously studied 2 year out conditions – now using 5 and 10 year cases
  – Allows for forecasted geographical growth factors, rather than regional average
  – Models upcoming coal plant retirements, while accounting for remaining long term firm transmission rights
  – Reflects long term unit outages at Upper Columbia resources
  – Seasonal de-rate of peak generating capability for some thermal resources
  – Reduction in flows to California for scenarios with limited generation

• Updated commercial long term firm Total Transfer Capability (TTC):
  – North of John Day (+400 MW)
  – South of Allston (+115 MW to BPA’s allocation of this shared path)
  – West of John Day (+230 MW)
  – West of McNary (+730 MW)
  – West of Slatt (+470 MW)
COMMERCIAL ACTIVITIES
Commercial Assessment

• The new study-based Commercial Assessment process takes into consideration all known information about each TSR; for example:
  – In the case of many NT forecasts, the load and generation had already been modeled in ATC calculations, so no impact to queued parties resulted from accepting these forecasts

• This study-based approach, in conjunction with ATC changes, resulted in some offers of transmission service and encumbrance of ATC for NT forecasts made possible without infrastructure upgrades
Commercial Activities

• 1,593 MW of service encumbered for NT load and resource forecasts across the FCRTS
• 1,465 MW of transmission service awarded to PTP requests
  – 900 MW of redirects
  – 452 MW of “firmed up” Conditional Firm
  – 113 MW of new service
• Evaluated all pending requests and identified the need for the next cluster study
  – Requests previously studied and awaiting a plan of service remain in the queue
  – Sub-grid constraints continue to require further analysis
TSR STUDY AND EXPANSION PROCESS (TSEP)
Updates on previously-studied (2016 and earlier) requests

• Since the conclusion of the 2016 study, BPA has offered and Customers have executed Preliminary Engineering Agreements for 1,028 MW of incremental service.

• Additionally, 100 MW of incremental service await completion of the Puget Sound Area Study Team upgrades as identified in previous ColumbiaGrid and BPA Cluster Study reports.
2019 Cluster Study Overview

<table>
<thead>
<tr>
<th></th>
<th>Customers</th>
<th>TSR Count</th>
<th>MW Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>17</td>
<td>105</td>
<td>3,993</td>
</tr>
<tr>
<td>Redirect</td>
<td></td>
<td>98</td>
<td>3,797</td>
</tr>
<tr>
<td>Redirect</td>
<td></td>
<td>7</td>
<td>196</td>
</tr>
</tbody>
</table>

Of the 105 TSRs, 104 are for Point-to-Point service

- Six customers account for 84% of requested MW demand
- Five customers account for 82% of all TSRs

Note – this presentation does not include previously-studied TSRs
2019 Source & Sink Areas (by Proportionate MW)

Source Areas

- Tri-Cities: 1,025
- Central OR: 778
- Boardman/McNary: 768
- Olympic Peninsula: 600
- Mid-C Area: 140
- Eastern WA: 135
- Montana: 14
- Mossyrock: 6

Sink Areas

- Portland Metro Area: 1,806
- Puget Sound/Seattle Area: 1,298
- Southern Intertie: 565
- Olympia/Kitsap: 200
- E. Wash/Idaho/W. Montana: 114
- FCRPS: 10

For Discussion Purposes Only
Geography of Source & Sink Areas (> 90% of Demand)

**Generation Zones**

A. Tri-Cities (1,025 MW – 26%)
B. Central Oregon (778 MW – 20%)
C. Boardman/McNary (768 MW – 19%)
D. Olympic Peninsula (600 MW – 15%)
   - All existing resources
E. Gorge (527 MW – 13%)

**Portland-area Deliveries**

- 1,806 MW of requested demand (approximately 45% of all study demand)

**Puget Sound-area Deliveries**

- 1,298 MW of requested demand (approximately 32% of all study demand)

**Deliveries to Big Eddy/John Day**

- 565 MW of requested demand (approximately 14% of all study demand)
2019 Cluster Study Next Steps

- Cluster Study Agreement execution process and queue update has completed
- BPA has identified the constrained flowgates for the cluster study and is currently identifying the necessary plans of service (i.e., 2019 Cluster Study is underway)
- BPA will update participants with specific plan of service information (cost, schedule) as soon as possible following study completion
  - BPA will also make any possible offers of service following study completion
- BPA expects to begin preparations for a 2020 Cluster Study in late summer 2019, according to the below schedule
CONDITIONAL FIRM UPDATE
Conditional Firm Service Milestones

- Within the next year, SOA “Mandatory Reassessment CF” and existing SOA-only Bridge will be converted to 7F Firm service.
  - Benefit of Commercial Assessment ATC changes
  - Includes PTP and NT service
- BPA expects to offer CF service over External Interconnections
  - Currently limited to WOG path but exploring other External Interconnections
  - System limitations prevent awards that require CF on both External Interconnections and Network Flowgates
  - Eligibility will be assessed on a case-by-case basis technical requirements of a TSR
  - CF Business Practice v22 will be posted as final
- BPA is evaluating its capability to offer Reassessment CF, on a case by case basis, beyond the minimum term of two years consistent with FERC guidance
COMMERCIAL NEXT STEPS
DRAFT - Commercial Activity Roadmap

**Jan – Dec 2019**
- Commercial Assessment will be a continuous process lasting throughout the year
- ATC Methodology Review will be a continuous activity
  
**Mar – Jun 2019**
- Scope/Research Intertie Study Process

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1. CS Posting – Advanced Notice
2. CS Posting – Final
Upcoming Milestones

• 2019 Milestones
  – Spring 2019 – Completion of 2019 Cluster Study
  – Business Practices (e.g. TSEP, CF, NT)
  – Conditional Firm
  – Long-Term ATC Methodology update(s)

• Beyond 2019 (currently)
  – Intertie Studies Scoping
  – Customer election for Conditional Firm as part of system impact study