2019 Long Term Available Transfer Capability (ATC) Update

November 12, 2019
Scenarios in the 2019 ATC Update

- Long Term ATC Base Case
  - Covers the post 13 month time horizon
  - Completed annually to meet BPA’s obligation under the Long Term ATC Methodology to perform an annual update
- New off-peak Spring (May) scenario
  - Stress flows in E>W direction
- New flow-based ETC values for West of Hatwai E>W
Assumptions in the 2019 ATC Update

• Base cases: 2024 & 2029 January, May, and August
  ➢ Allows for forecasted geographical growth factors
  ➢ Models upcoming coal plant retirements, while accounting for remaining long term firm transmission rights
  ➢ Reflects long term unit outages at Upper Columbia resources

• Peak load cases: reduction in flows to California for scenarios with limited generation

• Off-peak load cases: Merit order dispatch displaces highest cost resources
More Assumptions in the 2019 ATC Update

- No new major generating resource additions
- Slatt-Buckley 500 kV series capacitor in-service 2024 & 2029
- Schultz-Wautoma 500 kV series capacitor in-service 2029
- + 700 MW of new long term transmission commitments made since the 2018 ATC Update
- Regional (Northwest) load growth:
  - ~100 MW peak growth in 5 year cases
  - ~700 MW peak growth in 10 year cases
More Assumptions in the 2019 ATC Update

- Flowgate Commercial TTC Changes

<table>
<thead>
<tr>
<th>Flowgate Name</th>
<th>Previous TTC</th>
<th>Current TTC</th>
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<tbody>
<tr>
<td>North of John Day N&gt;S</td>
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<tr>
<td>West of McNary E&gt;W</td>
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<td>5230</td>
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<tr>
<td>South of Custer N&gt;S</td>
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Results & Observations

I-5 N>S Flowgates:

**South of Custer, Raver to Paul, Paul to Allston, South of Allston**

Resulting in changes in ATC:

- 200 MW of firm service from Grays Harbor generation
- Schultz-Wautoma 500 kV series capacitor
- Longview, WA area load forecast modifications
- Variation in geographical growth factors

ATC decreased for South of Allston, increased for other paths
More Results & Observations

Central Washington N>S Flowgates:

North of Hanford

Resulting in variations in ATC:

- Higher output at Upper Columbia resources
- Load forecasts inform geographical growth factors across 10 year horizon
  - Changed from decrease in ATC over time to an increase

North of John Day

New Spring off-peak scenario resulted in decreased ATC
More Results & Observations

Oregon/Washington E=W Flowgates:

West of McNary, West of Slatt

Resulting in decrease in ATC:

- Slatt-Buckley 500 kV series capacitor modeled in-service

West of John Day

- Load forecasts inform geographical growth factors across 10 year horizon
  - Less ATC in near term, more ATC in long term

West of Lower Monumental

New Spring off-peak scenario resulted in decreased ATC
More Results & Observations

Winter Flowgates:

Cross Cascades North E→W
Resulting in gains in ATC:
  ➢ Series capacitors in-service draw flows to the South

Cross Cascades South E→W
Minimal changes in ATC of this path across 10 year horizon

North of Echo Lake S→N
Resulting in gains in ATC:
  ➢ Reduction of long term forecast for Canadian Entitlement Return
New Long Term ATC Values

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<tr>
<th>Path Name</th>
<th>TTC</th>
<th>2021</th>
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<th>2023</th>
<th>2024</th>
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Immediate Next Steps

- 2019 ATC Update results will be released and applied to all pending long term transmission service requests (TSRs)
- ETC encumbrances to reflect NT forecasts will continue to be refined
- Postings on the external site will be updated over the next month: https://www.bpa.gov/transmission/Reports/TransmissionAvailability/Pages/default.aspx
  - ATC, AFC and Conditional Firm Inventory
  - AFC/ATC Less Pending Queued Request Inventory
  - Long Term Pending Queue
  - Long Term PTDF Calculator
  - Long Term Power Transfer Distribution Factors (PTDF) Table