ISSUE #29: HOURLY FIRM
Today’s Objective

As committed in the TC-20 settlement, BPA will provide an update and share results of the evaluation of Hourly Firm based on the Monitoring and Evaluation Plan.
Overall Events

- Curtailments:
  - 32 events over 8 individual days (12/1 – 2/29)

- TLR Avoidance Events:
  - 46 events over 42 individual days (12/1 – 2/29)

- Refused TSRs due to TLR Avoidance:
  - 635 (626 on NOEL) (12/1 – 2/29)

- Percentage of hours where actual flows were within 20% of TTC:
  - 2.68% - System-wide (31.09% - NOEL only)
## TLR Avoidance Events – March 2019-February 2020

<table>
<thead>
<tr>
<th>Count of TLR Avoidance Events</th>
<th>Days/Hours Impacted</th>
<th>Refused TSRs</th>
<th>Flowgate</th>
<th>Annotation</th>
<th>Initial Start</th>
<th>Final Instance</th>
</tr>
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<tbody>
<tr>
<td>Total: 157</td>
<td>Total: 195/1798</td>
<td>Total: 139</td>
<td>-</td>
<td>-</td>
<td>2019-03-05 07:00:00 PS</td>
<td>2020-02-25 18:00:00 PS</td>
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<td>134 Firm / 5 Non-Firm</td>
<td>177 / 1827</td>
<td>1222</td>
<td>N_ECOL_S&gt;N</td>
<td>North of Echo Lake Mitigation</td>
<td>2019-03-05 07:00:00 PS</td>
<td>2020-02-25 18:00:00 PS</td>
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<td>17 Firm</td>
<td>17/29</td>
<td>17</td>
<td>SOALSN</td>
<td>South of Allston Mitigation</td>
<td>2019-08-06 16:00:00 PD</td>
<td>2019-08-06 20:00:00 PD</td>
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</tbody>
</table>

*Days and Hours impacted count is not mutually exclusive.*
TLR Avoidance Events
(03/01/2019 - 02/29/2020)

*Chart includes information for flowgates with greater one percent of hours where actual flows were within 20% of TTC.*
Flows within 20% of TTC

- Percent Below 20%
- Percent Within 20%

<table>
<thead>
<tr>
<th>Month</th>
<th>NOEL</th>
<th>WOCN</th>
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March 17, 2020
Pre-decisional. For Discussion Purposes Only.
DEEP DIVE

FEBRUARY 2020
NORTH OF ECHO LAKE
Deep Dive Conditions

- Timeframes – Event 1: February 5-7, 2020
  Event 2: February 16 – 18, 2020
  Event 3: February 22 -24, 2020

- Curtailment Events – 11
- TLR Avoidance Events (February 2020) – 20 (20 individual days)
- Planned Outages – (detailed on following slide)
- February 5, 2020 was 59° the warmest on record

Dispatcher Actions

Event 1: Bypassed series capacitors from 1200 to 1600 PST
# Key NOEL Outage Summary

\[ N_{ECOL} S>N \]

<table>
<thead>
<tr>
<th>Event (from previous slide)</th>
<th>Annotation</th>
<th>Start (order by start)</th>
<th>Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SCL- EAST PINE-DENNY 115kV CABLE &amp; EAST PINE BANK 95 (SLIM 636)</td>
<td>2020-02-05 08:00:00 PS</td>
<td>2020-02-06 20:00:00 PS</td>
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<td>2</td>
<td>BPA - MONROE 500kV NORTH BUS INCLUDING CHIEF JO-MONROE 1 500kV LINE (STUDY 637 R2)</td>
<td>2020-02-17 07:00:00 PS</td>
<td>2020-02-22 17:00:00 PS</td>
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<tr>
<td>3</td>
<td>BPA-CHIEF JOSEPH-MONROE 1 500kV LINE (SLIM 641 R3)</td>
<td>2020-02-22 17:00:00 PS</td>
<td>2020-03-13 17:00:00 PD</td>
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</tbody>
</table>
Product Usage - PTP - 1 Year

- ORIGINAL
- RENEWAL
- RESALE TO SELF
- REDIRECT
- RESALE FROM MARKET
- DEFERRAL

MW

Product Usage - NT - 1 Year

MW


0  500  1000  1500  2000  2500  3000  3500  4000

ORIGINAL  RENEWAL
Information Availability

- Reports and raw data will be generated per the Hourly Firm Monitoring and Evaluation Plan

- Post the updated and generated reports on a quarterly basis on BPA’s external website

Proposed Timeline & Next Steps

1. Quarterly Monitoring and Evaluation Plan Updates:  
   – June 24, 2020

2. Comments on the Hourly Firm information discussed today are due March 31, 2020