ISSUE #9: TRANSMISSION LOSSES

Step 4: Discussion on possible alternatives to solve Issue
Agenda

- Discuss Alternatives (Step 4)
Objectives

- Settling of transmission wheeling losses
  - Ensure that BPA captures
    - Value of capacity
    - Value of energy
  - Minimize
    - Administrative costs of system administration, maintenance, and reconciliation of deviations
    - Load uncertainty
<table>
<thead>
<tr>
<th>Customer Comment Themes</th>
<th>BPA Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers suggested financial settlement of deviations of loss returns <em>(expected vs actual)</em></td>
<td>Considered in alternatives 2 through 5</td>
</tr>
<tr>
<td>Customers requested to understand BPA’s willingness to review and alter it’s financial settlement</td>
<td>Considered in alternatives 3, 5 and 6</td>
</tr>
<tr>
<td>Customers requested the ability to elect physical or financial settlement of loss obligations</td>
<td>Considered in alternatives 1 through 5</td>
</tr>
</tbody>
</table>
## Alternatives

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Time to Return In-Kind</th>
<th>Settle Delivery Errors Financially?</th>
<th>Financial Rate Set by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Keep Status quo</td>
<td>168 hours</td>
<td>No</td>
<td>Trading Floor</td>
</tr>
<tr>
<td>2. Keep in-kind at 168 hours + implement financial settlement only for inaccurate return of energy (“Financial for inaccuracy - FFI”)</td>
<td>168 hours</td>
<td>Yes</td>
<td>Trading Floor</td>
</tr>
<tr>
<td>3. Keep in-kind at 168 hours + change financial rate to be set in rate case + implement FFI</td>
<td>168 hours</td>
<td>Yes</td>
<td>Rate Case</td>
</tr>
<tr>
<td>4. Change in-kind to concurrent only + implement FFI</td>
<td>Concurrent</td>
<td>Yes</td>
<td>Trading Floor</td>
</tr>
<tr>
<td>5. Change in-kind to concurrent only + change financial rate to be set in rate case + implement FFI</td>
<td>Concurrent</td>
<td>Yes</td>
<td>Rate Case</td>
</tr>
<tr>
<td>6. Change to financial settlement only</td>
<td>N/A</td>
<td>N/A – No delivery</td>
<td>Rate Case</td>
</tr>
</tbody>
</table>
Alternative 1 - Status Quo

- **Financial Settlement**
  - Price established by BPA Power Trading Floor

- **In-Kind**
  - Delivery is scheduled for 168 hours following the hour of incurring the line loss
  - Incorrect MWs are rolled forward to another hour/day

- **Slice**
  - Losses are deducted from Slice Right-To-Power 168 hours following the hour of incurring line loss

*Note: Additional context available from 12/12/19 customer workshop:*

## In-Kind Process – Current State

### Workflow Process for Current State 168 Hour Loss Returns – does not include time estimates for software maintenance, testing, or resolution of periodic contract problems

<table>
<thead>
<tr>
<th>Calculate &amp; Verify Routine</th>
<th>Day Prior to Preschedule</th>
<th>Preschedule</th>
<th>Real Time</th>
<th>After-the-Fact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BPA Transmission</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- BPA Transmission</td>
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<td></td>
</tr>
<tr>
<td>- BPA Power</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Customer</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>- Billing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### In-Kind Process Diagram

- **BPA Transmission**:
  - Loss Reports: 120 Hrs/Mo
  - O&M Validation: 60 Hrs/Mo
  - E-Tag Validation: 40 Hrs/Mo

- **BPA Power**:
  - Planning Form: 120 Hrs/Mo
  - O&M Update: 60 Hrs/Mo

- **Customer**:
  - Create TSR: 40 Hrs/Mo
  - Modify Tag: 20 Hrs/Mo

- **Billing**:
  - 130 Hrs/Mo

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**Notes**: March 17, 2020 Pre-decisional. For Discussion Purposes Only.
Alternative 2

- Financial Settlement
  - Price established by BPA Power Trading Floor

- In-Kind
  - Delivery is scheduled for 168 hours following the hour of incurring the line loss
  - *Incorrect MWs are settled financially*

- Slice
  - Losses are deducted from Slice Right-To-Power 168 hours following the hour of incurring line loss
Alternative 3

- Financial Settlement
  - *Price established through BP-22 rate proceedings*

- In-Kind
  - Delivery is scheduled for 168 hours following the hour of incurring the line loss
  - *Incorrect MWs are settled financially*

- Slice
  - Losses are deducted from Slice Right-To-Power 168 hours following the hour of incurring line loss
168 Hour Return + Default to Financial
Alternative 4

- Financial Settlement
  - Price established by BPA Power Trading Floor

- In-Kind
  - Delivery is scheduled for concurrent time by the customer
  - Incorrect MWs are settled financially

- Slice
  - Losses are deducted from Slice Right-To-Power concurrently

Note: Prior customer comments indicated concern regarding design, implementation, and workload for concurrent loss returns
Alternative 5

- **Financial Settlement**
  - Price established through BP-22 rate proceedings

- **In-Kind**
  - Delivery is scheduled for concurrent time by the customer
  - Incorrect MWs are settled financially

- **Slice**
  - Losses are deducted from Slice Right-To-Power concurrently

Note: Prior customer comments indicated concern regarding design, implementation, and workload for concurrent loss returns
Alternative 6

- All Customers are transitioned to financial settlement of losses
  - Financial Settlement
    - *Price established through BP-22 rate proceedings*
Financial Loss Returns Process

Workflow Process for Financial Loss Returns – does not include software maintenance and testing

<table>
<thead>
<tr>
<th>Workflow Stage</th>
<th>Start of FY/CY</th>
<th>Preschedule</th>
<th>Real Time</th>
<th>After-The-Fact</th>
<th>Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPA Transmission</td>
<td>BPA Transmission Total</td>
<td>Minimal Workload</td>
<td>Preschedule</td>
<td>Real Time Schedule</td>
<td>ATF Tax Schedule Check-out</td>
</tr>
<tr>
<td>BPA Power</td>
<td>~30 Minutes Per Customer each year</td>
<td>No Incremental FTE Impact Routine Planning/Scheduling Activity</td>
<td>Forecast Non-Scheduled Load</td>
<td>Preschedule</td>
<td>Real Time Schedule</td>
</tr>
<tr>
<td>BPA Billing</td>
<td>~20 Customer elect Financial returns annually</td>
<td>FTE Impact Minimal - Automated Process</td>
<td>Create Bill To Customers</td>
<td>Routine Billing Activity</td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td>Customer Contacts Trading Floor</td>
<td>Customer Signs Financial Confirm</td>
<td>Preschedule</td>
<td>Real Time Schedule</td>
<td>Review Bill</td>
</tr>
</tbody>
</table>
Criteria for Decision

- Aligned with the *pro forma* tariff and/or industry standards or best practices.
- Appropriate and fair compensation for FCRPS Capacity and Energy
- Efficiency of process and ease of administration, including managing deviations and imbalances
- Simplicity of policies to administer and enforce
- Cost of on-going IT system maintenance
- Align losses valuation with pricing and scheduling used when commercially purchasing energy
- Customer impact
Next Steps

- **Workshop on May 19, 2020**
  - Step 5 - Customer feedback on loss returns alternatives
  - Pricing methodology
  - Update on loss factor analysis

- **Workshop on June 23, 2020**
  - Step 6 - Staff proposal for loss returns alternatives
  - Discuss customer feedback
    - Pricing methodology and loss factor update