EIM Charge Code Allocation #1

Step 1: Introduction and Education

Step 2: Description of the Issue
Objective

- Address charge code allocation policy issues to determine the approach Bonneville should adopt to recover its costs (or distribute credits) for charge codes it receives as an EIM Entity.

Note: Settlement mechanics (e.g. frequency or type of BPA customer billing) will be addressed separately in future workshops, if there is a sub-allocation methodology adopted.
Organizational Relationships: CAISO

CAISO

CAISO Tariff

Invoice

 Participating Resource Scheduling Coordinator (PRSC)

 BPA Power & Non-Federal PRSCs

CAISO to BPA Relationship
(Not in Scope)

Invoice

 EIM Entity Scheduling Coordinator (EESC)

 BPA Transmission

CAISO Tariff
Organizational Relationships: EESC

EIM Entity Scheduling Coordinator (EESC)

BPA Transmission

EESC to Customers Relationship (In Scope for Charge Code Allocation Policy Team)

Charge Code Allocation

BPA Transmission Customers

Load

Non-Participating Resources

Wheel-Through & Interchange

BPA Tariff & Rates

Rate Design – Hold for Future BP-22 Rates Workshops
Organizational Relationships: PRSC

- **EIM Entity Scheduling Coordinator (EESC)**
- **BPA Transmission**
  - Charge Code Allocation
- **BPA Transmission Customers**
  - Load
    - Non-Participating Resources
    - Wheel Through & Interchange
- **BPA Power**
  - Cost Recovery
  - BPA Power Customers
  - Rate Schedules
  - Product Type
  - Transfer Policy
  - Rate Design – Hold for Future BP-22 Rates Workshops

**BPA Power**

**Participating Resource Scheduling Coordinator (PRSC)**

**Charge Code Allocation**

**BPA Power Customers**

**BPA Contracts & Rates**

**PRSC to Customers Relationship**
(In scope for Charge Code Allocation Policy Team)

**Rate Schedules**
**Product Type**
**Transfer Policy**

Rate Design – Hold for Future BP-22 Rates Workshops
CAISO Settlement Process Consideration

- Direct sub-allocation of EIM Charge Codes to customers would indirectly expose customers to CAISO Settlement process.

- CAISO Settlement Process is Complex and Administratively Burdensome
  - CAISO bills weekly; re-calculates Charge Codes multiple times for up to 3 years.
  - Disputes over sub-allocated EIM Charge Codes would have to be submitted to Bonneville; could lead to Bonneville bringing customer dispute to CAISO.

_Bonneville is still considering settlement mechanics, which will be addressed in a future workshop. While developing the charge code allocation methodology, there is awareness that if a sub-allocation methodology is adopted, it could have broad administrative impacts on customers’ and Bonneville’s billing._
The following slides provide lists of the charge codes by category for context. The charge code lists contain information on Bonneville’s experience with other EIM entities as examples to illustrate the range and volatility that can exist. Examples of Bonneville’s experience focused on the largest EIM balancing authorities that Bonneville has load in.
## CAISO EIM Charge Code List

### Primary Imbalance Charges

<table>
<thead>
<tr>
<th>CC #</th>
<th>Charge Code Name</th>
<th>CAISO &gt; EIM Entity Allocation</th>
<th>EIM Entity Sub Allocation</th>
<th>PacifiCorp Monthly</th>
<th>Idaho Power Monthly</th>
<th>NV Energy Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>64600</td>
<td>FMM Instructed Imbalance Energy EIM Settlement</td>
<td>EESC</td>
<td>PRSC</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td>64700</td>
<td>Real Time Instructed Imbalance Energy EIM Settlement</td>
<td>EESC</td>
<td>PRSC</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td>64750</td>
<td>Real Time Uninstructed Imbalance Energy EIM Settlement</td>
<td>EESC</td>
<td>Yes</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td>64740</td>
<td>Real Time Unaccounted for Energy EIM Settlement</td>
<td>EESC</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Primary Ancillary Service Charges

<table>
<thead>
<tr>
<th>CC #</th>
<th>Charge Code Name</th>
<th>CAISO &gt; EIM Entity Allocation</th>
<th>EIM Entity Sub Allocation</th>
<th>PacifiCorp Monthly</th>
<th>Idaho Power Monthly</th>
<th>NV Energy Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>7070</td>
<td>Flexible Ramp Forecast Movement Settlement</td>
<td>EESC</td>
<td>PRSC</td>
<td>(950)</td>
<td>56,701</td>
<td>(24,740)</td>
</tr>
<tr>
<td>7071</td>
<td>Daily Flexible Ramp Up Uncertainty Capacity Settlement</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td>(1,064)</td>
<td>5,995</td>
</tr>
<tr>
<td>7077</td>
<td>Flexible Ramp Forecast Movement Allocation</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7078</td>
<td>Monthly Flexible Ramp Up Uncertainty Award Allocation</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7081</td>
<td>Daily Flexible Ramp Down Uncertainty Capacity Settlement</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7087</td>
<td>Daily Flexible Ramp Down Uncertainty Award Allocation</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7088</td>
<td>Monthly Flexible Ramp Down Uncertainty Award Allocation</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CAISO EIM Charge Code List

Market Clearing / Neutrality / Cost Recovery Charges

<table>
<thead>
<tr>
<th>CC #</th>
<th>Charge Code Name</th>
<th>EIM Entity Allocation</th>
<th>EIM Entity Sub Allocation</th>
<th>PacifiCorp</th>
<th>Idaho Power</th>
<th>NV Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>6478</td>
<td>Real Time Imbalance Energy Offset - System</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64770</td>
<td>Real Time Imbalance Energy Offset EIM</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67740</td>
<td>Real Time Congestion Offset EIM</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69850</td>
<td>Real Time Marginal Losses Offset EIM</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66200</td>
<td>Bid Cost Recovery EIM Settlement</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66780</td>
<td>Real Time Bid Cost Recovery Allocation EIM</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8989</td>
<td>Daily Neutrality Adjustment</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8999</td>
<td>Monthly Neutrality Adjustment</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Penalty Charges

<table>
<thead>
<tr>
<th>CC #</th>
<th>Charge Code Name</th>
<th>EIM Entity Allocation</th>
<th>EIM Entity Sub Allocation</th>
<th>PacifiCorp</th>
<th>Idaho Power</th>
<th>NV Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>6045</td>
<td>Overscheduling and Under scheduling Charge</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6046</td>
<td>Under Scheduling and Over Scheduling Allocation</td>
<td>EESC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# CAISO EIM Charge Code List

## Administrative Charges

<table>
<thead>
<tr>
<th>CC #</th>
<th>Charge Code Name</th>
<th>CAISO &gt; EIM Entity Allocation</th>
<th>EIM Entity Sub Allocation</th>
<th>PacifiCorp BPA Peak Load 400+ Monthly</th>
<th>Idaho Power BPA Peak Load 300+ Monthly</th>
<th>NV Energy BPA Peak Load 100&lt;- Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>491</td>
<td>Green House Gas Emission Cost Revenue</td>
<td>PRSC</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>701</td>
<td>Forecasting Service Fee</td>
<td>PRSC</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1592</td>
<td>EP Penalty Allocation Payment</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2999</td>
<td>Default Invoice Interest Payment</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3999</td>
<td>Default Invoice Interest Charge</td>
<td>EESC</td>
<td>PRSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4515</td>
<td>GMC Bid Transaction Fee</td>
<td>PRSC</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4564</td>
<td>GMC-EIM Transaction Charge</td>
<td>EESC</td>
<td>PRSC</td>
<td>Yes</td>
<td>2,130</td>
<td>4,026</td>
</tr>
<tr>
<td>4575</td>
<td>SMCR -Settlements, Metering, and Client Relations</td>
<td>EESC</td>
<td>PRSC</td>
<td>Yes</td>
<td>-</td>
<td>121</td>
</tr>
<tr>
<td>5024</td>
<td>Invoice Late Payment Penalty</td>
<td>EESC</td>
<td>PRSC</td>
<td>Yes</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>5025</td>
<td>Financial Security Posting (Collateral) Late Payment Penalty</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>5900</td>
<td>Shortfall Receipt Distribution</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>5901</td>
<td>Shortfall Allocation Reversal</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>5910</td>
<td>Shortfall Allocation</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>5912</td>
<td>Default Loss Allocation</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>7989</td>
<td>Invoice Deviation Interest Distribution</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>7999</td>
<td>Invoice Deviation Interest Allocation</td>
<td>EESC</td>
<td>PRSC</td>
<td>No</td>
<td>-</td>
<td>10,870</td>
</tr>
<tr>
<td>8526</td>
<td>Generator Interconnection Process GIP Forfeited Deposit Allocation</td>
<td>EESC</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Policy Question

- What approach should Bonneville adopt in recovering its costs (or distributing credits) for charge codes that it will receive as an EIM Entity from the CAISO?
  - Should Bonneville roll-in the costs/benefits to its current transmission rates? (completely insulating customers from direct CAISO costs/credits)
  - If not, how should Bonneville recover from customers? (partial insulation, no insulation from costs/credits)
    - E.g. Sub-allocation by each charge code or sub-allocation by charge code grouping
Potential Bonneville Charge Code Allocation Principles

- Full and timely cost recovery, considering cost causation while balancing with simplicity.
- Develop understandable and transparent methodology that we can build upon as we gain experience in the market.
- Feasibility of implementation, recognizing forecasting constraints and administrative implications.
Potential Transmission Charge Code Allocation Principles

- Equitable cost allocation between Federal and non-Federal users of the transmission system.
- Behavior-driven cost causation where practical, to incentivize appropriate market behaviors.
- Mitigate seams and potential for charge code allocation misalignments with other EIM Entities.
Potential Power Charge Code Allocation Principles

- Costs and benefits are allocated among cost pools consistent with the Tiered Rates Methodology and power product purchased from BPA.
- To the extent possible, treat directly connected and transfer customers comparably.
- Maintain similar level of exposure to actual market conditions as is included in power products today.
### Methodology Spectrum

<table>
<thead>
<tr>
<th>Factors to Evaluate:</th>
<th>Complete Insulation</th>
<th>Partial Insulation</th>
<th>No Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Charge Code Allocation</strong></td>
<td>No Allocation of Charge Codes</td>
<td>Sub-Allocate Some Charge Codes</td>
<td>Pass-through All Charge Codes</td>
</tr>
<tr>
<td><strong>Forecast in Rates</strong></td>
<td>Full Costs Forecast</td>
<td>Some Costs Forecast</td>
<td>No Costs Forecast</td>
</tr>
<tr>
<td><strong>Cost Recovery Mechanism</strong></td>
<td>Risk Mechanism within Rate Structure</td>
<td>Combination of Direct Assignment and Rate Structure</td>
<td>Direct Assignment</td>
</tr>
<tr>
<td><strong>Potential Structural Changes</strong></td>
<td>Minimal Changes to Product / Rate Structure</td>
<td>Some Changes to Product / Rate Structure</td>
<td>Changes to Product / Rate Structure</td>
</tr>
<tr>
<td><strong>Billing Implications</strong></td>
<td>Minor Changes to Billing</td>
<td>Some Changes to Billing</td>
<td>Re-structuring of Billing</td>
</tr>
<tr>
<td><strong>Customer Impact</strong></td>
<td>Low Impact</td>
<td>Moderate Impact</td>
<td>High Impact</td>
</tr>
</tbody>
</table>

*Phase Two (Issue Analysis and Alternative Development) will evaluate the feasibility of the factors across the methodology spectrum, which will lead to identifying feasible alternatives.*
Complete Insulation

**Advantages**
- No charge code sub-allocation
- No settlement re-calculation process with customers
- Limited rate schedule changes
- No significant change to customer bills
- Disassociates customer/BPA disputes from BPA/CAISO disputes
- Customers would not need resources to verify CAISO data
- BPA gains experience in the market to provide understanding for future charge code allocation development

**Potential Challenges**
- Separation of market behavior and cost causation, reducing customer visibility
- Cost recovery would not occur through the EIM design and a financial cost recovery mechanism would need to be determined
- BPA’s existing behavioral price signals may not fully align with CAISO’s structure for the same action
- Unable to pass on EIM-specific price signals
- Potential seams issues between EIM BAAs
## Partial Insulation

### Advantages
- Incentivize appropriate market behaviors through charge code allocation
- Enables BPA to develop experience in the market, but begins to stage implementation of sub-allocating
- Customers begin developing experience with CAISO price signals
- Potential for closest alignment with other EIM entities, may reduce seams issues

### Potential Challenges
- Opens up potential customer exposure to EIM settlement process, potentially increasing need for customers to validate data
- Begins to create billing complexity, given the volume of settlements
- Bonneville takes on risk of consolidating and allocating charge codes
No Insulation

Advantages

• Cost causation incentivizes appropriate market behavior
• Allocation of costs tie closely to behaviors
• Close alignment with other EIM entities, may reduce seams issues
• Reduces need to design risk mechanisms
• Greatest transparency in the allocation of specific charge codes from CAISO to BPA to customers

Potential Challenges

• Significant change to customer bills to address CAISO settlement processes
• Aligning disputes between CAISO/BPA and Customer/BPA would be complex to administer
• BPA and customers would need to consider increasing resources to validate EIM data
• Not all EIM settlements with BPA will be 100% verifiable, which could create challenges when passed to customers
• With direct assignment, may create greater uncertainty for customers in bills
• May go beyond structure other EIM entities use today, increasing settlement complexity
EIM Charge Code Next Steps

- Feedback on policy questions and charge code allocation principles
  - Please submit to techforum@bpa.gov (with copy to your account executive) by Friday, January 3

- Next Charge Code Allocation Workshop: February 25
  - Phase 2
    - Step 3: Analysis of the Issue
    - Step 4: Alternatives