ISSUE #1: EIM CHARGE CODE ALLOCATION

Step 3: Data and/or analysis that supports the issue
Step 4: Discussions on possible alternatives to solve 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.
- Policy direction will be set as the starting point for development of the BP-22 Initial Proposal
  - Charge code allocation policy issues will not be finalized until the BP-22 Record of Decision

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.
Customer Feedback Themes

- Customers expressed interest in phasing in changes for the EIM and considering a partial insulation approach, which BPA has considered in developing alternatives.

- Working towards a methodology that considers cost causation and market implications was expressed, consistent with the charge code allocation principles BPA developed.

- Requests for additional charge code education were received and further discussion occurred at a customer-led workshop. Today’s workshop will work to provide further information, in context of the alternatives and the relationships to BPA’s existing structure.
  - Magnitude of charges/credits was requested, but there is not comparative information available, given the complexities and size of BPA’s BAA compared to other EIM entities.
The charge code allocation policy proposal will provide the framework for rate design, then rate design will be developed later.
Timing Context for Rate Development and EIM Information Availability

BP-22
- Spring-Summer 2020 Development
- November 2020 Release IP
- July 2021 Release FP
No BPA BAA-specific EIM data available during development

BP-24
- Spring-Summer 2022 Development
- November 2022 Release IP
- July 2023 Release FP
Less than a half year of BPA BAA-specific EIM data available during development

BP-26
- Spring-Summer 2024 Development
- November 2024 Release IP
- July 2025 Release FP
Two years of BPA BAA-specific EIM data available during development

March 2022 Anticipated EIM Entry
Sub-Allocation Focuses on EESC

- Sub-allocation considerations included in today’s workshop are focused on the EESC approach.

- Allocation of Bonneville Power’s costs and benefits as the PRSC is a Power product issue that will be discussed in a future workshop.
FERC Approved Allocation Method Overview

**Imbalance Energy**
- Instructed
- Uninstructed
- Flexible Ramping

**Real-Time Energy Offsets**
- Congestion Offsets
- Bid Cost Recovery

**Congestion Offsets**

**Bid Cost Recovery**

**Grid Management**

**Forecasting Service Fee**

**Administrative Penalties**

**Imbalance:**
- Direct Assignment

**Flexible Ramping:**
- Measured Demand

**Market Clearing / Neutrality / Cost Recovery**

**Primary Charges**

**Penalty Charges**

**Measured Demand:**

**Measured Demand by Direction**

**Over Scheduling**

**Under Scheduling**

**Grid Management**

**Forecasting Service Fee**

**Administrative Penalties**

**Primary Charge Exceptions: Not Sub-Allocated**
- Real Time Unaccounted for Energy (64740)
- Daily Flex Ramp Up Uncertainty Capacity (7071)
- Daily Flex Ramp Down Uncertainty Capacity (7081)

**Administrative Exceptions**
- GMC (4564 & 4575): Measured Demand
- Forecasting Service Fee (701): Direct Assignment
- Enforcement Protocol Penalty Allocation (1592): Direct Assignment

**Sub-Allocation Methods Defined**
- **Direct Assignment:** Costs assigned to a customer through a rate or direct pass through that can be linked to a specific action taken by the customer.
- **Measured Demand:** A cost shared among all customers regardless of participation or actions taken.
- **Measured Demand by Direction:** Costs assigned to customers based on contribution to the charge.
CAISO to BPA Comparisons

### Imbalance Energy (IIE & UIE)

**Similar to BPA’s Energy Imbalance (EI) and Generation Imbalance (GI)**

- Intent is to settle for generation and load imbalances
- UIE is most similar to the EI/GI of today
- IIE also settles Interchange imbalances, which is different from today

### Over & Under Scheduling

**Similar to BPA’s Intentional Deviation (ID) and Persistent Deviation (PD)**

- Over/Under Scheduling (applied to load) is meant to prevent entities from leaning on the market
- ID (applied to variable generators) and PD (applied to load and dispatchable generators) are meant to prevent leaning on the BAA

### Flexible Ramping

**Similar to BPA’s DERBS, VERBS, & RFR**

- Intent is to ensure there is enough uncertainty capacity to meet unexpected load and generation changes (or load forecast error)
- DERBS and VERBS is capacity to meet unexpected generation changes
- RFR is capacity to meet load
### Criteria for Evaluation

#### Feasibility of Implementation

**Customer Perspective**
- Resource Costs
- Training Costs
  (scaled to EIM experience)

**BPA Perspective**
- Resource Costs to Implement Design
- Recognition of Uncertainties in Forecasting Costs and Revenues

#### Administrative Burden

**Customer Perspective**
- Cost of Administering
- Volume of Supporting Billing Data

**BPA Perspective**
- Cost of Administering Billing and Settlements
- Level of Service based on Complexity of Billing
- Design Limitations based on System Capabilities

#### Cost Recovery Design

**Customer Perspective**
- Full and Timely Cost Recovery
- Cost Allocation Consistent with Cost Causation
- Incentivize Appropriate Market Behaviors
- Understandable and Transparent Methodology
- Flexibility in Design to Develop with Market Experience
- Minimize Settlement Seams Issues
- Design with Consideration of Risk Mitigation

**BPA Perspective**
- Cost of Administering Billing and Settlements
- Level of Service based on Complexity of Billing
- Design Limitations based on System Capabilities
Decision-Tree Based Alternatives

Level of Sub-Allocation

- No Sub-Allocation
  - 0 Codes
  - Customer Bills Do Not Reflect Any Codes
  - No Settlement Re-Calculations for Customers
  - Minimal Administrative Burden for Customers & BPA
  - Market Experience Prior to Charge Code Allocation
  - Potential for Misalignment on Behavioral Signals
  - Limits Customer Ability to Begin Adapting to EIM

- BPA-Designed Partial Sub-Allocation
  - 1-26 Codes
  - Customer Bills Reflect Some Codes
  - Settlement Re-Calculations for Customers
  - Low Administrative Burden for Customers & BPA
  - No Market Experience Prior to Starting Charge Code Allocation
  - Potential for Misalignment on Behavioral Signals

- Existing FERC Approved Sub-Allocation Model
  - 27 Codes
  - Customer Bills Reflect FERC Approved Codes
  - Settlement Re-Calculations for Customers
  - High Administrative Burden for Customers & BPA
  - No Market Experience Prior to Charge Code Allocation
  - Behavioral Signals Aligned with Others and Low Risk of Misalignment with EIM
  - Customers Adapt to EIM from Beginning

- Sub-Allocation Past Existing Models
  - Greater than 27 Codes
  - Customer Bills Reflect Additional Codes
  - Settlement Re-Calculations for Customers
  - High Administrative Burden for Customers & BPA
  - No Market Experience Prior to Charge Code Allocation
  - Behavioral Signals Aligned with EIM and Low Risk of Misalignment with Others
  - Customers Fully Adapt to EIM from Beginning
No Sub-Allocation Alternative

Define Cost Recovery Mechanism

No Sub-Allocation

0 Codes

- Customer Bills Do Not Reflect Any Codes
- No Settlement Recalculations for Customers
- Minimal Administrative Burden for Customers & BPA
- Market Experience Prior to Charge Code Allocation
- Potential for Misalignment on Behavioral Signals
- Limits Customer Ability to Begin Adapting to EIM

While cost recovery mechanisms would be developed later, options for cost recovery under any of the alternatives may include:

1) Rate Design Mechanisms
2) Planned Risk Mechanisms
3) Status Quo (utilize existing risk mechanisms only)

Criteria Considerations:

- Feasible to Implement
- Postpones settlement process development, but will require cost recovery mechanisms
- Minimal administrative burden for customers, thereby limiting BPA administrative burden
- Delays alignment with EIM signals, but there is flexibility for future allocation development
- Administrative Burden
- Cost Recovery Design
- Feasible to Implement

February 25, 2020
Pre-decisional. For Discussion Purposes Only.
BPA-Designed Partial Sub-Allocation Alternative

BPA-Designed Partial Sub-Allocation

1-26 Codes

- Customer Bills Reflect Some Codes
- Settlement Re-Calculations for Customers
- Low Administrative Burden for Customers & BPA
- No Market Experience Prior to Starting Charge Code Allocation
- Potential for Misalignment on Behavioral Signals
- Customers Start Adapting to EIM from Beginning

Behavior Driven or Distribution Approach

Define Code Scope

Define Sub-Allocation Mechanics for In-Scope Codes

Define Cost Recovery Mechanism for Out of Scope Codes

Criteria Considerations:
- Feasible to Implement
  - Starts settlement process and will require some cost recovery mechanisms
- Administrative Burden
  - Some administrative burden for customers, thereby adding to BPA administrative burden
- Cost Recovery Design
  - Starts alignment with EIM signals, but there is flexibility for future allocation development

February 25, 2020 Pre-decisional. For Discussion Purposes Only.
## BPA-Defined Partial Sub-Allocation
### Base Code Option

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
<th>Rationale for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>64750</td>
<td>Uninstructed Imbalance Energy (Schedule 4 and Schedule 9)</td>
<td>Direct Assignment</td>
<td>Customer submits a schedule to BPA based on customer forecast</td>
</tr>
<tr>
<td>64600</td>
<td>FMM Instructed Imbalance Energy (Energy Imbalance)</td>
<td>Direct Assignment</td>
<td>Customer has the ability to change schedule in real-time “EIM Market”</td>
</tr>
<tr>
<td>64700</td>
<td>Real-Time Instructed Imbalance Energy (Energy Imbalance)</td>
<td>Direct Assignment</td>
<td>Customer has the ability to change schedule in real-time “EIM Market”</td>
</tr>
</tbody>
</table>

Codes in **bold** are included in FERC-Approved sub-allocation.

- Approach captures all energy imbalance calculations and real-time schedule changes.
- Sub-allocating this set of codes on its own ignores the neutrality charges and credits passed on by the CAISO to EIM entities.
- Today’s EI and GI bands may be further evaluated given the potential EIM entry.
## BPA-Defined Partial Sub-Allocation

### Base + Neutrality Code Option

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
<th>Rationale for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>64770</td>
<td>Real Time Imbalance Energy Offset EIM</td>
<td>Measured Demand (BPA May Consider Alternative Methods – such as Pro-Rata Shares of Code Components)</td>
<td>Compensation or charges used to achieve revenue neutrality within each BAA when the market settles.</td>
</tr>
<tr>
<td>64740</td>
<td>Real Time Unaccounted for EIM Energy Settlement</td>
<td>Measured Demand (BPA-Proposed Method)</td>
<td>Is presumed to be caused by losses not calculated by the CAISO.</td>
</tr>
<tr>
<td>69850</td>
<td>Real Time Marginal Losses Offset EIM</td>
<td>Measured Demand</td>
<td>Associated with a change in losses due to RT generation dispatches.</td>
</tr>
<tr>
<td>6478</td>
<td>Real Time Imbalance Energy Offset</td>
<td>Measured Demand</td>
<td>Last allocation to achieve revenue neutrality within CAISO after 64770 settles.</td>
</tr>
</tbody>
</table>

Codes in **bold** are included in FERC-Approved sub-allocation.

- Neutrality Codes could be sub-allocated in addition to the Base Codes.
- While 64740 is not currently part of the FERC-approved sub-allocation, this code is part of the neutrality codes that settle the market.
- See next slide for mapping between the Base and Neutrality codes.
Within the CAISO financial settlements, the Base and Neutrality charge codes are combined to complete the IIE and UIE transactions. The map above shows how the Base codes flow into the calculations for the Neutrality codes in order to financially settle the market.
BPA-Defined Partial Sub-Allocation

**Potential Adder: Scheduling Penalty Codes**

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
<th>Rationale for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>6045</td>
<td>Under/Over Schedule Load Charge</td>
<td>Measured Demand by Direction</td>
<td>Bonneville decides to hold customers responsible for over and under scheduling</td>
</tr>
<tr>
<td>6046</td>
<td>Under/Over Schedule Load Allocation</td>
<td>Measured Demand by Direction</td>
<td>Bonneville decides to hold customers responsible for over and under scheduling</td>
</tr>
</tbody>
</table>

Codes in **bold** are included in FERC-Approved sub-allocation.

- If the Base or Base + Neutrality options are selected, Scheduling Penalties could be a potential adder for sub-allocation.
- As described, Over/Under Scheduling prevents entities from leaning on the market, whereas ID and PD prevent entities from leaning on the BAA.
# BPA-Defined Partial Sub-Allocation

## Potential Adder: EIM Dispatch Codes

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
<th>Rationale for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>66200</td>
<td>RTM Bid Cost Recovery EIM Settlement</td>
<td>Measured Demand</td>
<td>Reimbursements where the commitment costs were not covered by the LMP.</td>
</tr>
<tr>
<td>66780</td>
<td>Real Time Bid Cost Recovery EIM Allocation</td>
<td>Measured Demand</td>
<td>Charges to EESC to reimburse generating resources for costs not recovered through the LMP.</td>
</tr>
<tr>
<td>67740</td>
<td>Real Time Congestion Offset EIM</td>
<td>Measured Demand</td>
<td>Recovers the difference between market forecasted congestion cost and resulting congestion cost based on EIM dispatches.</td>
</tr>
</tbody>
</table>

Codes in **bold** are included in FERC-Approved sub-allocation.

- If the Base or Base + Neutrality options are selected, EIM Dispatch Codes could be a potential adder for sub-allocation.
BPA-Defined Partial Sub-Allocation

*Potential Adder: Flexible Ramp Codes (Slide 1 of 2)*

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
<th>Rationale for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>7076, 7077, 7078, 7087, and 7088</td>
<td>Flexible Ramping <em>(Detail by Code on Next Slide)</em></td>
<td>Measured Demand</td>
<td>Capacity held out to cover load forecast uncertainty.</td>
</tr>
</tbody>
</table>

Codes in **bold** are included in FERC-Approved sub-allocation.

- If the Base or Base + Neutrality options are selected, Flexible Ramp Codes could be a potential adder for sub-allocation.
- Flexible Ramping Defined: Capacity on participating units capable of meeting a five minute ramping need used to address load uncertainty realized prior to Real-Time Dispatch (RTD).
- Today’s DERBS, VERBS, and RFR are similar in working to meet unexpected generation and load changes.
  - FCRPS is the primary provider for the flexible ramping needed within BPA’s BAA.
### BPA-Defined Partial Sub-Allocation

**Potential Adder: Flexible Ramp Codes** *(Slide 2 of 2)*

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
<th>Rationale for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>7076</td>
<td>Flexible Ramp Forecast Movement Allocation</td>
<td>Measured Demand</td>
<td></td>
</tr>
<tr>
<td>7077</td>
<td>Daily Flexible Ramp Up Uncertainty Award Allocation</td>
<td>Measured Demand</td>
<td></td>
</tr>
<tr>
<td>7078</td>
<td>Monthly Flexible Ramp Up Uncertainty Award Allocation</td>
<td>Measured Demand</td>
<td>Capacity held out to cover load forecast uncertainty.</td>
</tr>
<tr>
<td>7087</td>
<td>Daily Flexible Ramp Down Uncertainty Award Allocation</td>
<td>Measured Demand</td>
<td></td>
</tr>
<tr>
<td>7088</td>
<td>Monthly Flexible Ramp Down Uncertainty Award Allocation</td>
<td>Measured Demand</td>
<td></td>
</tr>
</tbody>
</table>

Codes in **bold** are included in FERC-Approved sub-allocation.
**Existing FERC Approved Sub-Allocation Model Alternative**

- **Existing FERC Approved Sub-Allocation Model**
  - 27 Codes

**Use FERC Model for Code Scope**

- **Define Sub-Allocation Mechanics for In-Scope Codes**
- **Define Cost Recovery Mechanism for Out of Scope Codes**

**Criteria Considerations:**
- Feasible to Implement
- Settlement process for majority of codes and will require cost recovery mechanisms
- Administrative Burden
- High administrative burden for customers and BPA
- Cost Recovery Design
- Aligns with EIM signals, with potential limitation on flexibility for future allocation development

**Approved sub-allocation methodologies are the result of other EIM entities filing tariffs with FERC.**

- Customer Bills Reflect FERC Approved Codes
- Settlement Re-Calculations for Customers
- High Administrative Burden for Customers & BPA
- No Market Experience Prior to Charge Code Allocation
- Behavioral Signals Aligned with Others and Low Risk of Misalignment with EIM
- Customers Adapt to EIM from Beginning
Detailed FERC Approved Sub-Allocation

**Sub-Allocated Codes (slide 1 of 4)**

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>4564</td>
<td>GMC EIM Transaction Charge (Schedule 1A NEVP)</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>4575</td>
<td>GMC Scheduling Coordinator ID Charge</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>4989</td>
<td>Daily Rounding Adjustment</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>4999</td>
<td>Monthly Rounding Adjustment</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>6045</td>
<td>Under/Over Schedule Load Charge</td>
<td>Measured Demand by Direction</td>
</tr>
<tr>
<td>6046</td>
<td>Under/Over Schedule Load Allocation</td>
<td>Measured Demand by Direction</td>
</tr>
<tr>
<td>6478</td>
<td>Real Time Imbalance Energy Offset</td>
<td>Measured Demand</td>
</tr>
</tbody>
</table>

Codes in **bold** are included as options for sub-allocation under the BPA-Defined Partial Sub-Allocation alternative.

- For codes not listed, there is not a sub-allocation method assigned (see Codes without FERC-Approved Sub-Allocation List on Slide 2)

## Detailed FERC Approved Sub-Allocation

### Sub-Allocated Codes *(slide 2 of 4)*

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>64750</td>
<td>Uninstructed Imbalance Energy (Schedule 4)</td>
<td>Direct Assignment</td>
</tr>
<tr>
<td>64600</td>
<td>FMM Instructed Imbalance Energy (Schedule 4, Bonneville Interpretation)</td>
<td>Direct Assignment</td>
</tr>
<tr>
<td>64700</td>
<td>Real-Time Instructed Imbalance Energy (Schedule 4, Bonneville Interpretation)</td>
<td>Direct Assignment</td>
</tr>
<tr>
<td>64770</td>
<td>Real Time Imbalance Energy Offset EIM</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>67740</td>
<td>Real Time Congestion Offset EIM</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>66200</td>
<td>RTM Bid Cost Recovery EIM Settlement</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>66780</td>
<td>Real Time Bid Cost Recovery EIM Allocation</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>69850</td>
<td>Real Time Marginal Losses Offset EIM</td>
<td>Measured Demand</td>
</tr>
</tbody>
</table>

Codes in **bold** are included as options for sub-allocation under the BPA-Defined Partial Sub-Allocation alternative.
## Detailed FERC Approved Sub-Allocation

### Sub-Allocated Codes *(slide 3 of 4)*

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>7070</td>
<td>Flexible Ramp Forecast Movement Settlement</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7071</td>
<td>Daily Flexible Ramp Up Uncertainty Capacity Settlement</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7076</td>
<td>Flexible Ramp Forecast Movement Allocation</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7077</td>
<td>Daily Flexible Ramp Up Uncertainty Award Allocation</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7078</td>
<td>Monthly Flexible Ramp Up Uncertainty Award Allocation</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7081</td>
<td>Daily Flexible Ramp Down Uncertainty Capacity Settlement</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7087</td>
<td>Daily Flexible Ramp Down Uncertainty Award Allocation</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>7088</td>
<td>Monthly Flexible Ramp Down Uncertainty Award Allocation</td>
<td>Measured Demand</td>
</tr>
</tbody>
</table>

Codes in **bold** are included as options for sub-allocation under the BPA-Defined Partial Sub-Allocation alternative.
## Detailed FERC Approved Sub-Allocation

### Sub-Allocated Codes (slide 4 of 4)

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
<th>FERC Allocation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>8989</td>
<td>Daily Neutrality Adjustment</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>8999</td>
<td>Monthly Neutrality Adjustment</td>
<td>Measured Demand</td>
</tr>
<tr>
<td>701</td>
<td>Forecasting Service Fee</td>
<td>Direct Assignment</td>
</tr>
<tr>
<td>1592</td>
<td>Enforcement Protocol (EP) Penalty Allocation Payment</td>
<td>Direct Assignment</td>
</tr>
</tbody>
</table>

Codes in **bold** are included as options for sub-allocation under the BPA-Defined Partial Sub-Allocation alternative.
Sub-Allocation Past Existing Models

Alternative

- Customer Bills Reflect Additional Codes
- Settlement Re-Calculations for Customers
- High Administrative Burden for Customers & BPA
- No Market Experience Prior to Charge Code Allocation
- Behavioral Signals Aligned with EIM and Low Risk of Misalignment with Others
- Customers Fully Adapt to EIM from Beginning

Criteria Considerations:
- Feasible to Implement
- Settlement process for majority of codes and will require cost recovery mechanisms
- Administrative Burden
- Highest amount of administrative burden for customers and BPA
- Cost Recovery Design
- Aligns with EIM signals past other entities, with potential limitation on flexibility for future allocation development
Additional Codes for Sub-Allocation

**Codes Without FERC-Approved Sub-Allocation**

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>64740</td>
<td>Real Time Unaccounted for EIM Energy Settlement</td>
</tr>
<tr>
<td>2999</td>
<td>Default Invoice Interest Payment</td>
</tr>
<tr>
<td>3999</td>
<td>Default Invoice Interest Charge</td>
</tr>
<tr>
<td>5024</td>
<td>Invoice Late Payment Penalty</td>
</tr>
<tr>
<td>5025</td>
<td>Financial Security Posting Late Payment Penalty</td>
</tr>
<tr>
<td>5900</td>
<td>Shortfall Receipt Distribution</td>
</tr>
<tr>
<td>5901</td>
<td>Shortfall Allocation Reversal</td>
</tr>
<tr>
<td>5910</td>
<td>Shortfall Allocation</td>
</tr>
<tr>
<td>5912</td>
<td>Default Loss Allocation</td>
</tr>
<tr>
<td>7989</td>
<td>Invoice Deviation Interest Distribution</td>
</tr>
<tr>
<td>7999</td>
<td>Invoice Deviation Interest Allocation</td>
</tr>
<tr>
<td>8526</td>
<td>Generator Interconnection Process GIP Forfeited Deposit Allocation</td>
</tr>
</tbody>
</table>

Code in **bold** is included as an option for sub-allocation under the BPA-Defined Partial Sub-Allocation alternative.

- Allocation method on each of the additional codes would need to be defined, as currently there is not a FERC-approved method for sub-allocation.

Alternative Trade-Offs

Level of sub-allocation requires alternative trade-offs, with considerations to the level of:

- **Precision** (behavior-driven cost causation)
- **Market Impacts** (understanding which behaviors drive majority of costs)
- **Administrative Complexity** (transparency and volume of data)
- **Data for Billing** (training needs and resources to interpret bills)
- **Service Needed to Support Design** (potential for increased costs to staff the support)
Next Steps

- Feedback on alternatives under consideration
  - Please submit to techforum@bpa.gov (with copy to your account executive) by Tuesday, March 10

- Next Charge Code Allocation Workshop: April 28
  - Step 5: Discuss Customer Feedback
  - Step 6: Staff Proposal