TC-22, BP-22 and EIM Phase III Customer Workshop

January 28, 2020
## Agenda

<table>
<thead>
<tr>
<th>TIME*</th>
<th>TOPIC</th>
<th>Presenter</th>
</tr>
</thead>
</table>
| 9:30 to 9:40 a.m. | Agenda Review, Prior Workshop Feedback & Safety | Rebecca Fredrickson  
Rachel Dibble |
| 9:40 to 10:15 a.m. | EIM Transmission Network Usage  
• Step 1 | Russ Mantifel |
| 10:15 to 10:45 a.m. | Non-Federal Resource Participation in EIM  
• Steps 1 & 2 | Eric King |
| 10:45 to 11:00 a.m. | BREAK | |
| 11:00 to 11:30 a.m. | EIM Metering Policies  
• Steps 1 & 2 | Kelly Gardner  
Kevlyn Baker |
| 11:30 to 12:00 p.m. | TC-20 Settlement Update  
• De Minimis Update  
• NT Roadmap | Katie Sheckells  
Suzanne Zoller |
| 12:00 pm to 1:00 pm | LUNCH | |
| 1:00 to 1:30 p.m. | TC-20 Settlement Update (cont.)  
• Intertie Studies | Bob King  
Lauren Nichols-Kinas |
| 1:30 to 2:45 p.m. | BP-20 Settlement Update  
Attachment 2, Gen Inputs | Frank Puyleart  
Jarek Hunger |
| 2:45 to 3:30 p.m. | Section 7(f) Power Rate Options | Paulina Cornejo |
| 3:30 to 4:30 pm | Long Term Financial Planning | Alex Lennox |

* Times are approximate.
AGENDA REVIEW AND FEEDBACK FROM PRIOR WORKSHOP
Just as a reminder: The Customer led workshops are reserved for customer collaboration or time that could be used to receive clarification on BPA workshop materials.
Engaging the Region on Issues

- After every workshop, BPA will provide a two-week feedback period for customers.
  - Input can be submitted via email to techforum@bpa.gov. Please copy your Power or Transmission Account Executive on your email.
- Issues will be presented according to the following process at workshops (multiple steps might be addressed in a single workshop):

  **Phase One: Approach Development**
  - Step 1: Introduction & Education
  - Step 2: Description of the Issue

  **Phase Two: Evaluation**
  - Step 3: Analyze the Issue
  - Step 4: Discuss Alternatives

  **Phase Three: Proposal Development**
  - Step 5: Discuss Customer Feedback
  - Step 6: Staff Proposal
## EIM Priority Issues

<table>
<thead>
<tr>
<th>#</th>
<th>Issue</th>
<th>BP-22</th>
<th>TC-22</th>
<th>Future BP/TC</th>
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<tbody>
<tr>
<td>1</td>
<td>EIM Charge Code Allocation</td>
<td>X</td>
<td>?</td>
<td>X</td>
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<tr>
<td>2</td>
<td>EIM Losses</td>
<td>X</td>
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<td>?</td>
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<td>3</td>
<td>Resource Sufficiency</td>
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<td>3a</td>
<td>- Balancing Area Obligations</td>
<td>X</td>
<td>X</td>
<td>?</td>
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<tr>
<td>3b</td>
<td>- LSE Performance &amp; Obligations</td>
<td>X</td>
<td>X</td>
<td>?</td>
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<tr>
<td>3c</td>
<td>- Gen Input Impacts</td>
<td>X</td>
<td>X</td>
<td>?</td>
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<td>4</td>
<td>Development of EIM Tariff Changes</td>
<td>X</td>
<td>?</td>
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<td>5</td>
<td>Transmission Usage for Network</td>
<td>X</td>
<td>X</td>
<td>?</td>
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<td>6</td>
<td>Non-federal Resource Participation</td>
<td>X</td>
<td>X</td>
<td>?</td>
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<td>7</td>
<td>Metering &amp; Data Requirements</td>
<td>X</td>
<td>?</td>
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<td>8</td>
<td>Evaluation of Operational Controls</td>
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<td>X</td>
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<td>#</td>
<td>Topics</td>
<td>BP-22</td>
<td>TC-22</td>
<td>Future BP/TC</td>
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<tr>
<td>9</td>
<td>Transmission Losses</td>
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<tr>
<td>10</td>
<td>Ancillary Services</td>
<td>X</td>
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<tr>
<td>11</td>
<td>Debt Management (Revenue Financing)</td>
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<tr>
<td>12</td>
<td>Generator Interconnection</td>
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<td>X</td>
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<td>13</td>
<td>Regional Planning</td>
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<td>Creditworthiness</td>
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<td>15</td>
<td>Incremental/Minor Changes to Agreement Templates</td>
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<td>16</td>
<td>Seller’s Choice</td>
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<td>17</td>
<td>Loads</td>
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<td>18</td>
<td>Sales</td>
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<td>19</td>
<td>Generator Interconnection (assumed for BP-22)</td>
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<td>20</td>
<td>Risk</td>
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<td>Revenue Requirements</td>
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<td>Review of Segments</td>
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<td>23</td>
<td>Review of Sale of Facilities</td>
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<td>24</td>
<td>Financial Leverage Policy Implementation</td>
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<tr>
<td>25</td>
<td>Power-Only issues</td>
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## Potential Future Rates & Tariff Issues

<table>
<thead>
<tr>
<th>#</th>
<th>Issue</th>
<th>BP-22</th>
<th>TC-22</th>
<th>Future BP/TC</th>
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<tbody>
<tr>
<td>26</td>
<td>Simultaneous Submission Window</td>
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<td>27</td>
<td>Study Process</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>28</td>
<td>Attachment C (Short-term &amp; Long-term ATC)</td>
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<td>?</td>
</tr>
<tr>
<td>29</td>
<td>Hourly Firm (TC-20 Settlement – Attachment 1: section 2.c.ii)</td>
<td></td>
<td></td>
<td>?</td>
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<tr>
<td>30</td>
<td>Required Undesignation</td>
<td></td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>31</td>
<td>Reservation window for Hourly non-firm</td>
<td></td>
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<td>?</td>
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<tr>
<td>32</td>
<td>Non-federal NT Redispatch</td>
<td></td>
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<td>?</td>
</tr>
<tr>
<td>33</td>
<td>PTP/NT Agreement Templates</td>
<td></td>
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<td>?</td>
</tr>
</tbody>
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## 12/12/19 Feedback Summary

<table>
<thead>
<tr>
<th>Themes</th>
<th>BPA's Response</th>
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</thead>
<tbody>
<tr>
<td>Transmission Losses concerns on pricing and capacity adder</td>
<td>The review of the pricing and the value for transmission losses will be discussed in the rate case.</td>
</tr>
<tr>
<td>Customers would like to have a better understanding of the objective and reason for change for Transmission Losses.</td>
<td>Losses will return in the March workshop to address this request.</td>
</tr>
<tr>
<td>Customers would like to have choices for settling transmission losses (i.e. physical vs financial). For example one choice could be to consider an option of returns in like kind with a penalty for customers who fail to return the loss obligation</td>
<td>Losses will return in the March workshop to begin sharing options.</td>
</tr>
<tr>
<td>Transmission loss factor should be established in Tariff proceedings</td>
<td>The Tariff does contain the annual average system loss factor for the network and intertie. We do not intend to suggest removing it from the Tariff.</td>
</tr>
<tr>
<td>Transmission losses should be included in the Transmission rates and rates schedule and should be equitably allocated</td>
<td>Bonneville intends to have any rate discussions during the upcoming rate case proceedings. Any discussion regarding the location (i.e. Power or Transmission Rates Schedules) will be discussed during the rate proceeding. Options of transmission losses pricing will be discussed in the rate case in steps 4 and 5.</td>
</tr>
<tr>
<td>The EIM losses are important and BPA is in the the best position to determine the appropriate transmission loss percentage for OATT service</td>
<td>In the workshops, steps 4 and 5 will discuss the option for the EIM Losses</td>
</tr>
<tr>
<td>Provide more information on the value lost to BPA from a customer’s failure to deliver In Kind</td>
<td>This will be addressed in steps 4 and 5.</td>
</tr>
<tr>
<td>Costs are inevitable so develop cost/benefit analysis (administrative burden) for financial returns (similar to what was developed for In Kind). In other words, realize that certain administrative costs may be worthwhile due to the market value they deliver – such costs should be appropriately allocated.</td>
<td>This will be addressed in steps 4 and 5</td>
</tr>
<tr>
<td>Be clearer of the strategic interplay between EIM Losses and Transmission Losses both in implementation and long-term</td>
<td>We will continue to look for opportunities to share interplay between EIM losses and Transmission losses if applicable. At this point, we do not see any interplay between EIM Losses and Transmission Losses.</td>
</tr>
<tr>
<td>Maintain separation between EIM Losses and Transmission Losses</td>
<td>We agree there is a separation of EIM Losses and Transmission Losses.</td>
</tr>
</tbody>
</table>
Customer proposed changes to EIM Charge Code principles | The team will consider the proposed principles and will give feedback to customers at the February workshop
---|---
Include a glossary of EIM charge codes and a crosswalk to current BPA rates where applicable | We will continue discussing the EIM charge codes and crosswalk to current BPA rates where applicable in the February workshop materials
EIM charge code cost allocation should include wheel through, preference customers and interchange and non-participating resources. How are customers outside the BA considered? | Analysis and alternatives will be discussed in steps 4 and 5.
EIM charge code cost allocation should be initially based on cost causation and should be phased in with a partial insulation | Cost allocation is an important issue and the feedback on a phased in and partial insulation will be considered in the alternatives development
As the EIM charge code cost allocation (and other EIM policy issues) is discussed, one consideration is to ensuring customers existing OATT rights are fully respected and that customers maintain the ability to use their rights without facing new costs. | In the evaluation phase, there will be consideration of OATT rights and how to recover new costs. In the steps 5 and 6 the consideration of OATT rights will be evaluated
More clearly tie Ancillary Services to EIM Charge Codes | In the rates discussion, there will be an in-depth discussion of tying the Ancillary Services to EIM Charge Codes where it is applicable.
ISSUE #5: EIM TRANSMISSION USAGE FOR NETWORK

Step 1: Introduction and Education

- Review of the use of transmission for EIM transfers
- EIM use of BPA’s system today
- Transmission provision for BPA EIM Entity (September ROD)
Transmission Usage Issues for EIM

- BPA’s decision to use the Interchange Rights Holder Methodology applies to transmission needed for BAA to BAA transfers of energy
  - BPA did not develop policies on how transmission can be made available for EIM Transfers
- BPA did not develop policies for transmission products and agreements needed for Participating Resources
Transmission For EIM

- As part of its optimization, the EIM dynamically transfers energy between EIM BAAs using dynamic schedules to meet load and imbalance every 15/5 minutes
- The EIM requires transmission to be made available to the market to facilitate this transfer of EIM Energy between EIM BAAs
- Dynamic Schedules are typically used for EIM Transfers
- Without transmission for EIM transfers the EIM can only optimize the load and resources in an individual BAA instead of across the EIM footprint
- This lack of transmission for EIM Transfers may result in a less economical dispatch and higher prices for energy in certain BAAs
- Physical transmission constraints are honored within each EIM BAA
EIM Transfer Schedules

- The EIM primarily uses dynamic schedules to transfer energy between EIM BAAs.
- One exception is on the COI where separate 15-minute normal/static schedules and 5-minute dynamic schedules are used due to DTC issues.
- The EIM Transfer for an EIM BAA is an algebraic quantity (positive for export and negative for import) for the NET energy exchange between a given BAA and the remaining BAAs in the EIM Area facilitated by the EIM.
- Energy delivered as an EIM Transfer is not tied to specific generation but modeled as an aggregate delivery of power between EIM BAAs.

Energy Transfer System Resources (ETSR)

- System Resources are defined in each EIM BAA to anchor the Energy Transfer schedules from that BAA to other BAAs in the EIM Area for tracking, tagging, and settlement.
  - Analogous to a Source or Sink on an e-Tag
- ETSRs are defined as aggregate system resources at the EIM BAA Default Generation Aggregation Point (DGAP), which is an aggregation of all supply resources in the BAA.
- Each ETSR is defined as either an import or an export resource, and it is associated with an EIM intertie with another EIM BAA, or a CAISO intertie with the CAISO.
EIM Transfers (Real-Time Display)
EIM and BPA Today

- The BPA transmission system is already being used for EIM transfers.
- PacifiCorp, PGE, Puget and Powerex have redirected long-term PTP on the BPA network that they donate to the EIM to facilitate EIM transfers.
- These companies donate transmission from their original reservations on the COI as well.
- BPA has worked with these entities and CAISO over the years to create business rules and operating protocols associated with the use of BPA transmission for EIM transfers.
ISSUE #5: EIM TRANSMISSION USAGE FOR NETWORK

Step 2: Description of the Issue
• Transmission issues identified in the ROD
• Additional transmission issues to be addressed
Transmission in Phase III

- BPA’s decision to use the Interchange Rights Holder Methodology applies to transmission needed for BAA to BAA transfers of energy

- This decision doesn’t address issues related to the use of transmission inside the BPA network

- These issues will be addressed as part of Phase III of BPA’s EIM process
Additional Policy Issues Identified in the ROD

- The September 2019 ROD identified three potential policy issues:
  - What, if any, network transmission requirements will there be for resource participation (e.g., designation or tagging requirement)?
  - Which transmission products are eligible for ETSRs (firm, non-firm)?
  - What is the process for transmission donation?
- Staff has developed an objective statement and restated the policy issues since the ROD was released.
Objective

- Adopt transmission-related policies for EIM use of BPA’s network that are non-discriminatory and do not negatively impact reliability and efficient EIM market while mitigating the commercial impacts on BPA’s transmission system and customers.
Phase III Transmission Policy Issues

- Transmission Agreements Required for Participating Resources
  - Issue 1: What type of contract should be required for Participating Resources to ensure they are subject to the terms of the tariff and BPs?
  - Issue 2: What type of transmission reservation, if any, should be required for Participating Resources?
Phase III Transmission Policy Issues

- Policy Issues Related to Transmission Donation
  - Issue 1: Which transmission products should be eligible for customer donations of transmission for EIM transfers?
  - Issue 2: What should the transmission donation process be?
EIM Transmission Next Steps

- Feedback on objective and policy questions
  - Please submit to techforum@bpa.gov (with copy to your account executive) by February 11, 2020.

- Next EIM Transmission workshop: May 20, 2020
  - Step 3: Analysis of the Issue
  - Step 4: Alternatives
EIM Transmission Usage for Network

Questions?
ISSUE #6: NON-FEDERAL GENERATION LOCATED IN THE BPA BAA

Step 1: Introduction and Education
Step 2: Description of the Issue
ROD and EIM Participation

- As part of Phase III, the ROD states that BPA will address EIM participation requirements for non-FCRPS resources.

- BPA will develop tools and processes for non-FCRPS resources becoming EIM Participating Resources.
Federal Resources

- **Participating Resources:** Grand Coulee, Chief Joseph, McNary, John Day, The Dalles, Bonneville, Lower Granite, Little Goose, Lower Monumental, and Ice Harbor (aka the Big 10).

- **Non-Participating Resources:** Non-Big 10 projects, which include headwater projects, Willamette projects, Palisades, Upper Snake projects, and CGS.

BPA discussed Federal Resources and the EIM in the October 11, 2018 EIM Stakeholder meeting (See link below)

Master File Characteristics of Each Resource

Resource Characteristics needed for both EIM Participating Resources and Non-EIM Participating Resources

- Resource ID
- Scheduling Coordinator ID
- Plant type (gas, hydro, etc.)
- Fuel type
- Start up information
- Ramp rates/heat rates
- Greenhouse gas information
- Pmin/PMax
- Minimum on/off time
- MSG configurations
- Intertie resource information
- Variable energy resource indicator

*Information taken from California ISO Day-Ahead Market Overview Presentation*
Participating Resource and Non-Participating Resource in the BPA BA

New Agreements
- EIM Participating Resource Agreements
  - with CAISO
  - with PRSC
  - with BPA

T-75 through T-55
- Base Schedule
  - CAISO
  - BPA
- Bid Range Capacity
  - CAISO
  - BPA
- Economic Bid Range
  - CAISO

Dispatch
- FMM and 5-min Dispatch from EIM
- Participating Resource will still consume Regulation in the BA
- BPA to dispatch Regulation

Settlement
- Resource Settles Charge Codes with EIM (IIE, UIE, other)
- Energy associated with Regulation BPA deploys included in settlement with EIM
- EIM Settles Charge Codes with BPA (IIE, UIE, other)
- BPA Settles with Non-participating Resource

Non-Federal Resource Elects to Participate
- Yes

Participating Resource Scheduling Coordinator (PRSC)

EIM Entity Scheduling Coordinator (EESC)
- Base Schedule
  - BPA
  - BPA gives to CAISO
- 5-min Dispatch = Base Schedule (VER Based on expected output within the hour)

BPA gives to CAISO
WHO CAN QUALIFY TO BE AN EIM PARTICIPATING RESOURCE?
Participating Resource Eligibility

The CAISO provides the ability for resources located in an EIM Entity’s BAA to become an EIM Participating Resource. A resource in the BPA BAA that elects to be an EIM Participating Resource must:

- Be physically located in or Pseudo-Tied into the BPA BAA
- Meet the Requirements of the CAISO
- Meet any technical requirements of BPA as the EIM Entity
- Meet metering requirements
- Be able to respond to dispatch instructions

Generation located in the BPA BAA that meets the requirements of BPA and the CAISO are eligible to participate in the EIM.

BPA is developing its technical requirements
External Resource Participation Eligibility (Dynamic/Pseudo-Tie)

The CAISO requires that an EIM Participating Resource be physically located in or Pseudo-Tied into an EIM Entity’s BAA.

**Use of Pseudo-Ties:**
- A resource owned or controlled by a Transmission Customer that is not physically located inside the metered boundaries of BPA’s BAA may participate in the EIM as a BPA EIM Participating Resource if the Transmission Customer has implemented a Pseudo-Tie into BPA’s BAA, consistent with BPA’s business practice posted on Transmission Provider’s OASIS, and has arranged firm DTC and transmission equal to the amount of energy that will be Dynamically Transferred through a Pseudo-Tie into BPA’s BAA.

**Use of Dynamic Schedules:**
- A resource owned or controlled by a Transmission Customer that is not physically located inside the metered boundaries of BPA’s BAA does not qualify to participate in the EIM as a BPA EIM Participating Resource if the Transmission Customer dynamically schedules the energy into BPA’s BAA.

**Based on the CAISO requirements, Resources that have implemented a Pseudo-Tie into BPA’s BAA are eligible to participate in the EIM.**

**BPA is developing its technical requirements**
Demand Response and Load Participation

The CAISO has market participation models that allow Demand Response and load to participate in the CAISO markets.

- Large single demand and/or demand response providers with the ability to aggregate customers capable of reducing their electric demand (load) can participate in the ISO day-ahead, real-time and ancillary services markets.

- Demand side resources can offer bids that reflect their flexibility to adjust their load in response to market schedules and dispatches.

BPA will need to determine to what extent BPA, as the EIM Entity, is able to support load within the BPA BAA, capable of Demand Response, to participate in the EIM.

Given the work load of becoming an EIM participant, BPA needs to prioritize work streams. At this time, enabling load to participate in the EIM is not a top priority.

If there are load customers that are wanting to participate in the EIM, please contact your AE.
EIM Participating vs Non-Participating

**EIM Participating Resource:**
- Eligible to be an EIM Participating Resource (located in or pseudo-tied into the BPA BAA)
- Characteristics of Resource provided to EIM
- Register with CAISO and BPA
- Have an EIM Participating Resource Scheduling Coordinator (PRSC)
- Submit resource plans
  - Base Schedules
  - Bid Range Capacity
  - Economic Bid Range
- Receive FMM and 5-min Dispatch from EIM
- Settle Charge Codes with EIM (IIE, UIE, other)

**Non-Participating Resource:**
- Located in or pseudo-tied into the BPA BAA
- Characteristics of Resource provided to EIM
- BPA to be the EIM Entity Scheduling Coordinator (EESC)
- Submit resource plans
  - Base Schedules
- Communicate with BPA about real-time operation
- Settle with BPA (BPA settle with EIM)
Participating Resources Scheduling Coordinator

The EIM Participating Resource shall be represented by an EIM Participating Resource Scheduling Coordinator (PRSC), which may be the EIM Participating Resource or another entity certified by the ISO to perform the functions of an EIM PRSC.

The PRSC is the participating resource (or a designated third-party) that:

- Is certified by the ISO
- Enters into the pro forma EIM Entity Participating Resource Scheduling Coordinator Agreement
- Interfaces with the Market Operator to:
  - Submit resource plans – the combination of
    - Base schedules
    - Energy bids
    - Ancillary services schedules
  - Receive dispatch instructions and market awards
  - Receive settlement statements and bills
Scheduling Coordination for Non-Participating Resources

Non-participating resources in the BPA BAA shall be represented by BPA as an EIM Entity Scheduling Coordinator (EESC)

BPA, as the EESC, will:
- Be certified by the ISO
- Enter into the *pro forma* EIM Entity Scheduling Coordinator Agreement

- Interface with the Market Operator to:
  - Submit resource plans – the combination of
    - Base Schedules
    - Ancillary services schedules (if any)
  - Submit Settlement Quality Meter Data (SQMD)
  - Receive settlement statements and bills
Issue: Technical Requirements for Participating and Non-Participating Resources
EIM Non-Federal Participating Resource Agreements

- The following CAISO agreements are required for all EIM Participating Resources:
  - EIM Participating Resource Agreement (CAISO/Resource)
  - EIM Participating Resource Scheduling Coordinator Agreement (CAISO/SC)
BPA BAA Technical Requirements for Participating and Non-Participating Resources

- The resource will need to meet BPA technical requirements in addition to all CAISO requirements.
- BPA will develop technical requirements and reflect those requirements in Tariff modifications and Business Practices.
  - BPA is in the process of reviewing EIM Business Practices posted by other BAs who have joined the EIM.
  - BPA will be as consistent with industry norms as possible.
- Business Practices will include:
  - BPA EIM Participating Resource Application and Processing
  - BPA EIM Participating Resource Certification
  - Resource Data requirements for both EIM Participating Resources and Non-Participating Resources
- Forms
  - Application Form
  - Non-Participating Resource Data
ISSUE #7: EIM METERING POLICIES

Step 1: Introduction and Education
Step 2: Description of the Issue
Agenda

- Overview of BPA Functions in EIM
- BPA Metering Standards
- BPA Area Load
- SQMD Plans
- Data Requests to Customers
- Metering Policy / Business Practice
EIM Roles

- **EIM Entity: BPA-T**
  - Balancing Authority responsible for:
    - Transmission constraints, intertie capacity for EIM management of BAA EIM RT action

- **EIM entity Scheduling Coordinator (EESC, BPA-T)**
  - Responsible for:
    - Enabling the BA participation in EIM submitting schedules to market, settlements for non-participating load & resources
EIM Roles (cont.)

- **EIM Participating Resource**
  - Responsible for:
    - Resources bidding supply into the EIM

- **EIM Participating Resource Scheduling Coordinator (PRSC)**
  - Responsible for:
    - Enable Participating resources, submitting schedules for PRs, Settlements for PRs

- **Local Regulatory Area (BPA)**
  - Responsible for:
    - Ensuring metering practices are applied consistently and in accordance with EIM Market requirements
Metering Technical Standards

- BPA’s current standard meets CAISO’s Business Practice
- BPA’s current technical requirements:
  - STD-000001 “Technical Requirements for Interconnection”
  - STD-DC-000005 “Meter Application Guide”
    - +/-1% metering system
      - 0.2 meter accuracy class
      - 0.3% CT/PTs accuracy
      - 5 min interval
EIM – Area Load Metering

- CAISO calculates Area Load using generation, interchange, and losses.
- BPA (EESC) does not plan to submit individual load meters to CAISO.
- BPA will use load meters for cost allocation, imbalance, and billing to BPA customers.
Settlement Quality Meter Data (SQMD) Plans

- One SQMD per unique Project Number (NRI – New Resource Implementation)
  - An EIM Metering Portfolio is comprised of all market resource generation (Participating and Non-Participating), ties, and load representing an entity’s EIM participation.

- Both BPA and the PRSC submit generation and interchange meter data to CAISO needs to be collected at the transmission voltage level or adjusted for losses to that point.
Data Needed for SQMD

- Meter information including – make, model, accuracy, single-line
  - Adjacent interchange
  - Generation within BPA BAA
- Expect requests from BPA to begin in March/April 2020
Metering Policy / Business Practice

- In early development, will include but is not limited to:
  - Required data for SQMD
  - Submission timelines
  - New interconnections and changes to existing generation and interchange

- Metering policy decisions will be documented in relevant business practices.
Metering Review & Update Project

- Implementing high-side metering for BPA’s participating resources
- Interchange metering to 5 min
- Developing SQMD Plans
- Providing input to business policy and practices
Next Steps

- By February 11th please provide feedback on the following via techforum@bpa.gov (with copy to your account executive):
  - EIM Network Usage
  - Non Federal Resource Participation in the EIM
  - EIM Metering Policies
- Next workshop is on February 25, 2020.
Proposed February Workshop Agenda

- Creditworthiness
  - Steps 1 & 2
- Resource Sufficiency
  - Steps 3 & 4
- EIM Charge Code Allocation
  - Steps 3 & 4
- Gen Inputs
  - Steps 1 & 2
- Generator Interconnection
  - Steps 1 & 2
- Regional Planning Organization (FERC update)
APPENDIX
Customer Led Workshop Protocol

- Submit a workshop request no later than one week before the scheduled date (see slide 4 for dates).
- Requests must include a list of topics/issues you wish to cover if you are requesting Bonneville SME support.
- Discussions/workshops will only cover previously reviewed materials.
- Customers must inform BPA if A/V resources are required to include remote participants and/or present materials within the Rates Hearing Room.
- BPA will verify that it will staff for the requested topics within three business days via Tech Forum.
### 12/15/19 Feedback Summary

<table>
<thead>
<tr>
<th>Themes</th>
<th>BPA’s Response: Updated 1/28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a detailed summary timeline with topics for each workshop</td>
<td>We will keep an agile schedule and adjust as we hear feedback from customers.</td>
</tr>
<tr>
<td>Customers concurred with BPA’s proposal for engagement for certain</td>
<td>No change</td>
</tr>
<tr>
<td>topics</td>
<td></td>
</tr>
<tr>
<td>Customers want early discussions on the following topics:</td>
<td>Based on customer feedback, we have started discussion on the identified topics from</td>
</tr>
<tr>
<td>• Transmission Usage</td>
<td>customers in Jan. and Feb. This is reflected in the schedule on the [Meetings and</td>
</tr>
<tr>
<td>• Creditworthiness</td>
<td>Workshops page](#)</td>
</tr>
<tr>
<td>• EIM Metering and Data Requirements</td>
<td></td>
</tr>
<tr>
<td>• EIM Non Federal Resources</td>
<td></td>
</tr>
<tr>
<td>Provide customers information on where/if there will be changes for</td>
<td>We recognize rates have dependencies on EIM policy topic decisions and we will stay</td>
</tr>
<tr>
<td>Rate Case topics</td>
<td>coordinated with the topics. We also recognize their dependencies on charge code, gen inputs</td>
</tr>
<tr>
<td></td>
<td>and Priority Firm Load. We have discussions on rate case issue in the Jan workshop and</td>
</tr>
<tr>
<td></td>
<td>will continue those discussions through the summer.</td>
</tr>
<tr>
<td>Provide an explanation of why the proposed future tariff topics are</td>
<td>The future deferred tariff topics are due to possible changes in industry standards and</td>
</tr>
<tr>
<td>not part of TC-22</td>
<td>developing markets. As we discussed in the Oct. 23 workshop, we are focusing on EIM for</td>
</tr>
<tr>
<td></td>
<td>this proceeding.</td>
</tr>
<tr>
<td>Identify early in steps 1 &amp; 2 where there are dependencies for other</td>
<td>We will identify the steps and to the extent we know the dependencies, will include them.</td>
</tr>
<tr>
<td>topics</td>
<td></td>
</tr>
<tr>
<td>Provide a crosswalk of the Tariff issues from TC-20 to TC-22</td>
<td>Please see appendix at workshop in Nov. 19.</td>
</tr>
</tbody>
</table>
### 12/15/19 Feedback Summary (cont.)

<table>
<thead>
<tr>
<th>Themes</th>
<th>BPA's Response: Updated 1/28</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAM impact on rates and tariff</td>
<td>EDAM policy is out of scope in the rates and tariff. Customers have the ability to participate directly in the CAISO’s EDAM policy initiative process. Bonneville’s evaluation of whether and how to join EDAM is anticipated to be another decision process – much like EIM – including the development of principles for our evaluation. We also anticipate that process would then be followed by rates and tariff cases.</td>
</tr>
<tr>
<td>EIM governance</td>
<td>EIM governance is out of scope in the rates and tariff process. Customers have the ability to participate in CAISO’s governance review process.</td>
</tr>
<tr>
<td>Leverage customer led workshops to share experiences and challenges</td>
<td>We worked with other participants to get a better understanding of their experiences and challenges. We also agree the monthly customer led workshops are an excellent forum to share experiences and challenges with other customers. Our first requested customer led workshop was 1/15.</td>
</tr>
<tr>
<td>Carry larger ancillary services reserves</td>
<td>This will be addressed in the Gen Inputs discussion.</td>
</tr>
<tr>
<td>More discussion is needed on steps 1 &amp; 2 for resource sufficiency. Customers provided several questions to gain a better understanding.</td>
<td>We will look at the schedule and update it to address these questions.</td>
</tr>
<tr>
<td>Themes</td>
<td>BPA's Response: Updated 1/28</td>
</tr>
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<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Develop a roadmap of how future deferred tariff topics are addressed.</td>
<td>The future deferred tariff topics are due to possible changes in industry standards and developing markets. We don’t have roadmaps at this time. We would look to develop roadmaps after the conclusion of TC-22 if warranted.</td>
</tr>
<tr>
<td>Regional Planning Organization may have a couple of options</td>
<td>This will be addressed in steps 3-6 of the RPO discussion. An RPO update will be discussed at the 2/25 workshop and step 3 will be addressed in the 4/28 workshop.</td>
</tr>
<tr>
<td>Oversupply discussion and if it is needed in EIM</td>
<td>As noted in the EIM discussions at <a href="https://www.bpa.gov/Projects/Initiatives/EIM/Doc/20190312-March-13-2019-EIM-Stakeholder-Mtg.pdf">https://www.bpa.gov/Projects/Initiatives/EIM/Doc/20190312-March-13-2019-EIM-Stakeholder-Mtg.pdf</a> BPA believes OMP is compatible with EIM. As we gain experience with EIM operations, we will continue to evaluate implementation and consider any potential changes in future tariff cases.</td>
</tr>
</tbody>
</table>