Pseudo-Ties of Shared Resources
Final Proposal

Jim Price
Sr. Advisor, Market Policy and Performance

Stakeholder Web Conference
September 1, 2020
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 – 10:10</td>
<td>Welcome</td>
<td>Jimmy Bishara</td>
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<tr>
<td>10:10 – 12:00</td>
<td>Final Proposal</td>
<td>Jim Price</td>
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<td>12:00 – 1:00</td>
<td>Break</td>
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<tr>
<td>1:00 – 2:50</td>
<td>Revised Draft Tariff Language</td>
<td>John Anders</td>
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<tr>
<td>2:50 – 3:00</td>
<td>Next Steps</td>
<td>Jimmy Bishara</td>
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</tbody>
</table>
ISO Policy Initiative Stakeholder Process

**PROPOSAL DEVELOPMENT**
- Issue paper
  - Straw proposal
- Draft proposal
- Draft business requirement specification
- Draft tariff
- Stakeholder input

**DECISION**
- Final proposal
- ISO Board
- EIM Governing Body
- Tariff filing
- FERC

**IMPLEMENTATION**
- Business practice manual revisions
- Market simulation
- Go Live

This represents the typical process, and often stages of the process run in parallel.

We are here
Initiative proposes a limited tariff change to facilitate pseudo-ties from EIM Entity BAAs to CAISO BAA

• Key issues in extending current options:
  – Dynamic transfers to CAISO BAA often use dynamic schedules, but economic bidding by dynamic schedules can conflict with EIM accounting
  – SC metering options now offer conversion to pseudo-ties, but tariff has only allowed pseudo-ties for entire generating resource. As discussed in earlier meetings, removing current limitation involves:
    • Logical Metering Settlement Quality Meter Data Plan (current requirement for Scheduling Coordinator Metered Entities)
    • New Shared Resource Allocation Protocol required to allocate operating characteristics; commitment, start-up, & minimum-load costs; bid cost recovery; outage coordination; etc. among multiple SCs

• Key benefits of using pseudo-ties for shared resources:
  – Facilitates full CAISO market participation in new EIM Entities
  – Keeps current resources available to the real-time market
Several resources in new EIM Entity BAAs need tariff and market enhancements for jointly owned units

- **Near-term:** Tariff for shared pseudo-ties to CAISO BAA, as simple generators (no infeasible operating points)
  - Sutter Energy Center: Regulatory contract for pseudo-ties to SMUD and CAISO, approved by FERC
  - LADWP resources: Intermountain Power Project
    - Future: Magnolia, Milford, Copper Mountain 3
  - Shared pseudo-ties between EIM Entities are already in place

- **Mid-term:** Enhanced functionality
  - Comprehensive joint ownership modeling in market initiatives roadmap in 2022 stakeholder initiative, for 2023 implementation
  - PNM’s Luna and San Juan will continue dynamic schedules until Tucson Electric Power joins EIM in Spring 2022, then pilot will be foundation for stakeholder initiative to ultimately offer enhanced joint-owned unit modeling to all market participants
Response to comments on Draft Final Proposal involved limited substantive additions to proposal (1 of 2)

• SCE comment: Shared Resource Allocation Protocol should include formula for allocation of outages
  – Protocol must define conditions leading to disproportionate outage allocation. Added: Must include formula.

• DMM comment: While allowing discretion over sharing, protect from extreme sharing protocols that may inflate or inequitably distribute bid cost recovery (BCR)
  – Existing tariff rules provide BCR for allocated costs, and unique circumstances must be documented in the protocol.
  – Added: Public information will include principles for allocation of telemetry, metered output, minimum & maximum output levels, minimum load & start-up costs.
  – Added: Procedures for revocation or suspension of participation for material deviations from the allocations protocol
Response to comments on Draft Final Proposal involved limited substantive additions to proposal (2 of 2)

- Six Cities & LADWP comments: Illustrate how potential inconsistencies & impacts arise with dynamic scheduling
  - Added: Example derived from dynamic schedule in EIM.

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<thead>
<tr>
<th></th>
<th>DAM</th>
<th>HASP</th>
<th>RTPD</th>
<th>RTD</th>
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</thead>
<tbody>
<tr>
<td>Generator A Dispatch (MW)</td>
<td>90</td>
<td>85</td>
<td>75</td>
<td>70</td>
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<tr>
<td>Bid Price ($/MWh)</td>
<td>45</td>
<td>45</td>
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<tr>
<td>Generator A LMP – Total ($/MWh)</td>
<td>50</td>
<td>46</td>
<td>43</td>
<td>40</td>
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<tr>
<td>Generator A LMP – Congestion</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>5</td>
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<tr>
<td>EIM Entity DGAP LMP - Congestion</td>
<td>n/a</td>
<td>0.85</td>
<td>6.50</td>
<td>4.50</td>
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- DAM dispatch in base schedule could be updated after HASP, but then requires using EIM’s data to track EIM Entity’s Net Scheduled Interchange.
- EIM’s energy settlement with Participating Resource is directly with resource, but difference between generator A’s LMP and default generation aggregation point (DGAP) may impact allocation of imbalance energy charges within BAA.
Proposed EIM Governing Body classification

• This initiative proposes to modify tariff rules governing pseudo-tied resources into CAISO BAA to allow pseudo-ties for only a portion of the resource’s capacity
  – Primary driver for this initiative is resources in EIM BAAs
  – Proposed changes also affect day-ahead market participation

• CAISO staff believes this initiative should be classified as hybrid, since the primary driver is EIM-specific but its applicability is broader. Accordingly, before filing the tariff amendment, staff would seek approval from both the EIM Governing Body and the Board of Governors

• Please provide comments on the proposed decisional structure for this initiative
### Proposed Initiative Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
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<tbody>
<tr>
<td>Post Issue Paper</td>
<td>May 7, 2020</td>
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<tr>
<td>Stakeholder Conference Call</td>
<td>May 14, 2020</td>
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<tr>
<td>Comments Due</td>
<td>May 29, 2020</td>
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<tr>
<td>Post Draft Final Proposal and Draft Tariff Language</td>
<td>July 10, 2020</td>
</tr>
<tr>
<td>Stakeholder Conference Call</td>
<td>July 17, 2020</td>
</tr>
<tr>
<td>Comments Due</td>
<td>July 31, 2020</td>
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<tr>
<td>Draft Tariff Language &amp; Final Proposal</td>
<td>August 6 &amp; 14, 2020</td>
</tr>
<tr>
<td>Stakeholder Call</td>
<td>September 1, 2020</td>
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<tr>
<td>Comments Due</td>
<td>September 15, 2020</td>
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<tr>
<td>EIM Governing Body &amp; CAISO Board of Governors</td>
<td>November 2020</td>
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<tr>
<td>Implementation</td>
<td>Q1 2021</td>
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Next steps

• All related information for this initiative is available at: https://stakeholdercenter.caiso.com/StakeholderInitiatives/Pseudo-ties-shared-resources

• Please submit stakeholder written comments on today’s discussion and the final proposal and draft language by September 15, 2020

Important – Please review new process for submitting comments

• Provide comments using the new stakeholder commenting tool

• First-time users must register using their email address in order to submit comments on initiatives

• The commenting tool is located on the Stakeholder Initiatives landing page (click on the “commenting tool” icon): https://stakeholdercenter.caiso.com/StakeholderInitiatives