



Pseudo-Ties of Shared Resources Issue Paper and Straw Proposal

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Stakeholder Web Conference

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New online stakeholder commenting tool coming this Spring

- Ability to view all comments with a single click.
- Ability to filter comments by question or by entity.
- Login, add your comments directly into the template and submit.
 - You can save and return to your entry anytime during the open comment period.

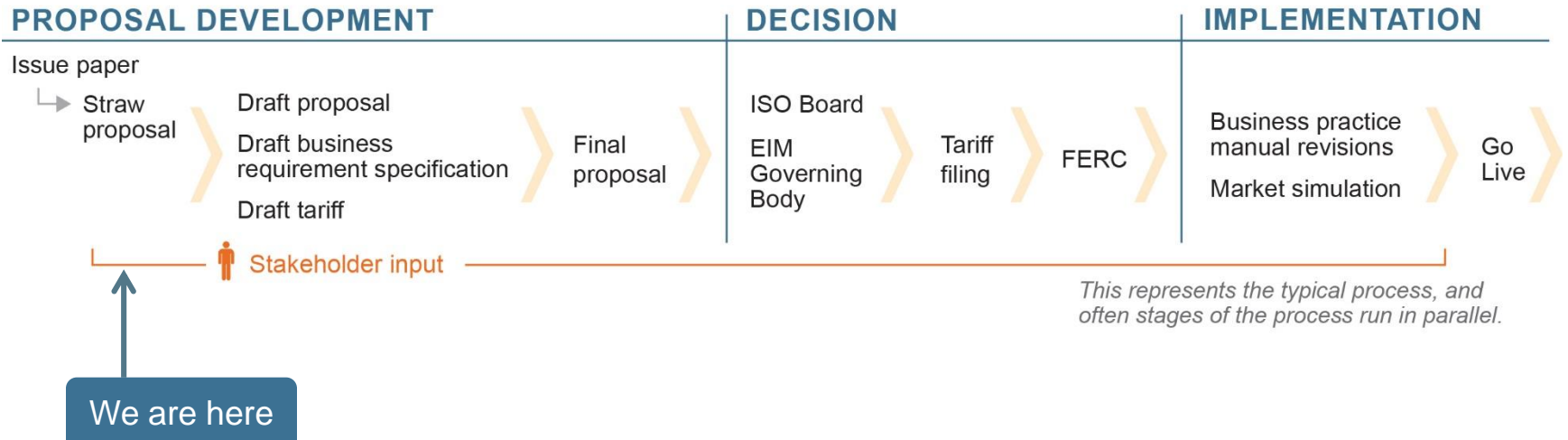
NOTE

Submitting comments in the new tool will require a one-time registration.

Agenda

Time	Topic	Presenter
1:00 – 1:10	Welcome	Jimmy Bishara
1:10 – 3:50	Pseudo-Ties of Shared Resources: Issue Paper and Straw Proposal	Jim Price
3:50 – 4:00	Next Steps	Jimmy Bishara

ISO Policy Initiative Stakeholder Process



Initiative proposes a limited tariff change to enable pseudo-ties from EIM Entity BAAs to CAISO BAA

- Key issues:
 - Dynamic transfers to CAISO BAA often use dynamic schedules, but economic bidding would conflict with EIM accounting
 - SC metering options now offer conversion to pseudo-ties, but tariff only allows pseudo-ties for entire generating resource. Propose removing current tariff limitation:
 - 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:
 - Allows new EIM entity to continue full CAISO market participation
 - Keeps current resources available to the EIM 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 currently pending FERC approval
 - LADWP resources: Intermountain Power Project
 - Future: Magnolia, Milford, Copper Mountain 3
 - EIM Entities already have shared pseudo-ties
- 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 1 & 4 initially using current model 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

Background: Market systems support pseudo-ties of shared resources between EIM Entity BAAs

- CAISO accommodates multiple pseudo-ties from single resources, between EIM Entity BAAs
- Dynamic schedules are more common into CAISO BAA, often for portions of resource output
- But economic bidding from dynamic resources would conflict with accounting for EIM Transfer System Resources, which are BAA-level dynamic schedules
 - ETSRs reflect bids of all EIM resources, with different constraints, producing inconsistency between energy prices & dispatch
- Thus, if dynamic schedules from EIM Entity BAAs to CAISO BAA use economic bids, they will need to be remodeled as pseudo-ties

Issue: CAISO tariff limits pseudo-ties to total generator output, due to past requirement for CAISO polling of one meter per unit

- CAISO's dynamic transfer stakeholder process in 2010-2011 included allowing multiple dynamic or hourly schedules from the same physical resource
- All CAISO generation required direct polling of meters, so only the total resource could be pseudo-ties
- 2017 initiative for metering rules enhancements created processes for SC-pollled metering within CAISO BAA, but did not address metering for pseudo-ties
- This initiative proposes to use the same Settlement Quality Meter Data process as part of enabling shared resource pseudo-ties

Pseudo-ties of shared resources raise more complex issues than single-owner pseudo-ties

- Modeling shared resources will be facilitated by a single entity that coordinates among the multiple owners
- This proposal describes requirements for a Shared Resource Allocation Protocol to be developed among the joint owners
 - Joint owners will designate one of their SCs as Protocol Administrator
 - Many technical details become consistent with the implementation for a single-owner resource
- Each share will remain subject to tariff requirements, contractual terms, business practices and NERC reliability standards applicable to generating unit participation in CAISO markets

Fundamental principles for CAISO market participation by pseudo-ties of shared resources include:

- Shares of a resource with an owner in CAISO BAA will be modeled within the CAISO BAA separately from shares of resource that is owned in other BAAs
- Each owner will be represented by a SC, and submit schedules and bids using the existing market mechanisms
- Other BAAs in the EIM area will register their shares as EIM resources
- The EIM Entity's operations will see separate resources at the shared resource's location
- The Protocol Administrator will provide separate telemetry signals for each share, and coordinate the logical metering calculation procedure
- Each owner's SC will submit a separate outage card

Shared Resource Allocation Protocol will add key details for pseudo-ties of shared resources

- CAISO tariff will provide default outage allocation method (pro rata based on shares of resource output)
- Each share will be subject to CAISO tariff section 9 for regarding submission and approval of outages
- Shared Resource Allocation Protocol must define conditions leading to disproportionate outage allocation
- Sum of resource shares' maximum capability cannot exceed plant's physical capabilities, including ramp rates and interconnection capacity
- Existing tariff rules should provide the bid cost recovery based on each share's allocated costs. Any unique circumstances affecting allocation of resource costs impacting CAISO settlements must be documented in the protocol.

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

Item	Date
Post Issue Paper	May 7, 2020
Stakeholder Conference Call	May 14, 2020
Comments Due	May 29, 2020
Post Draft Final Proposal and Draft Tariff Language (tentative)	June 16, 2020
Stakeholder Conference Call (tentative)	June 23, 2020
Comments Due (tentative)	July 7, 2020
Post Final Proposal / Additional Tariff Language (tentative)	July-August 2020
Stakeholder Call (tentative)	July-August 2020
Comments Due (tentative)	July-August 2020
EIM Governing Body & CAISO Board of Governors	September 2020
Implementation	Q1 2021

Next Steps

- Comments template available on the initiative webpage at <http://www.caiso.com/StakeholderProcesses/Pseudo-ties-shared-resources>
- Written comments should address
 - Identify set of issues that need to be addressed
 - Provide feedback on proposed scope
 - Provide feedback on proposals for tariff requirements
 - Provide potential design options to address identified issues
- Submit comments to initiativecomments@caiso.com by end of day May 29