



Pseudo-Ties of Shared Resources

Draft Final Proposal

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Stakeholder Web Conference

July 17, 2020

New online stakeholder commenting tool coming soon

- 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.

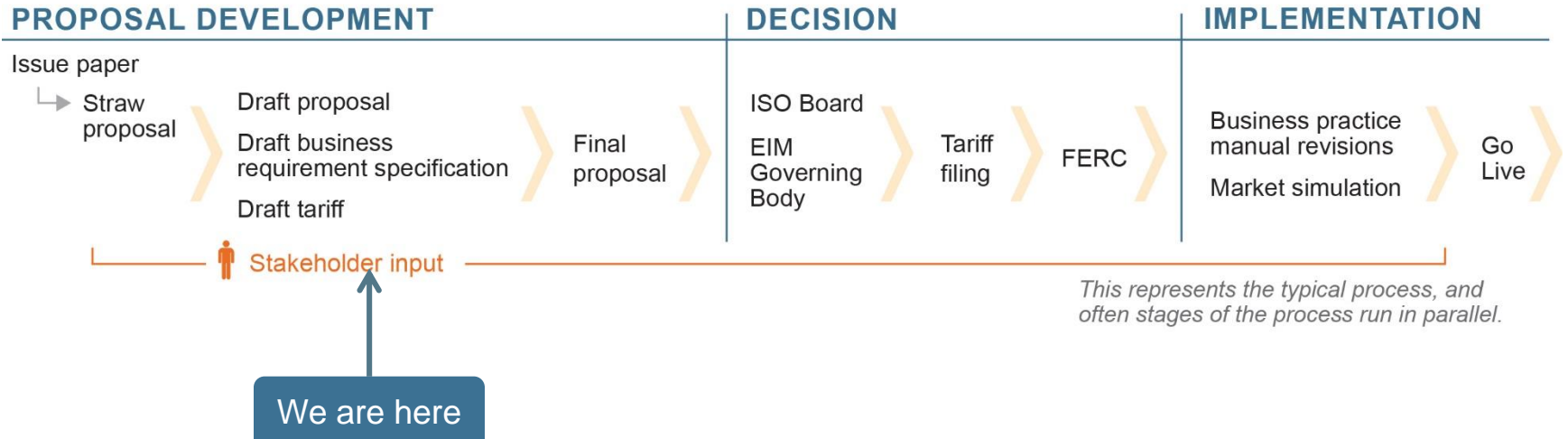
NOTE

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: Draft Final Proposal <ul style="list-style-type: none">• Review of proposal• Discussion of stakeholder comments	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 can 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 by using:
 - 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, approval by FERC
 - 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 can 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, CAISO recommends remodeling 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

- 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, who coordinates among the multiple owners
 - CAISO not a party to this agreement
 - Many technical details become consistent with the implementation for a single-owner resource
- Each share remains subject to tariff requirements, contractual terms, business practices and NERC reliability standards applicable to generating unit participation in CAISO markets
- To address a stakeholder concern: existing agreements may already have required content (can use different names)
 - Likely confidential, but SC agreements describe resources

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

- Shares with owner in CAISO BAA will be modeled within the CAISO BAA, separately from other shares
- Each owner has an SC, who submits schedules and bids
- Other BAAs in the EIM area register shares as EIM resources
- EIM Entity's operations will see separate resources at the resource's location – either participating or non-participating
- The Protocol Administrator (or similar entity) will provide separate telemetry signals for each share, and coordinate the logical metering calculation procedure
- Each owner's SC responsible for separate outage card
- Access and Identity Management process allows an SC to enable access for another SC to submit meter & outage data

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

- Each share will be subject to CAISO tariff section 9 regarding submission and approval of outages
- CAISO tariff will provide default outage allocation method (pro rata based on shares of resource output)
- 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.

Review of stakeholder comments: Roles of resource owners and Protocol Administrator

- Previous slides have included answers to some stakeholder comments and questions. The following slides continue the response.
- Can dispatches go directly to Protocol Administrator?
SC is responsible party, but existing Access and Identity Management process can enable access for other SCs to receive dispatches, and submit meter & outage data.
- Protocol Administrator should be independent 3rd-party.
Needs SC contractual commitment to follow CAISO tariff.
- Protocol Administrator should not rotate among owners.
Proposal states designation must be stable over time, but major changes in ownership can change designation.

Review of stakeholder comments: Metering requirements

- Need more description of metering requirements. *Metering and Telemetry page of CAISO web site documents existing tariff provisions and processes for SC-metered entities, including Logical Metering SQMD Plan. Protocol Administrator may assist SCs in computing and reporting meter data for each SC.*
- How will deviations be handled? *Meter data includes deviations. Instructed deviations include dispatches. Uninstructed deviations assigned to CAISO BAA shares should not exceed a pro-rata allocation.*

Review of stakeholder comments: Outage reporting

- Need more description of outage reporting requirements. *Existing requirements and processes apply to each share. OMS currently ties reporting to resource IDs for the shares of partial ownership, and not to the overall plant. Existing Access and Identity Management process allows SCs to enable access for other SCs to report outage data.*
- Need more detail about acceptable auditable self-monitoring compliance reporting requirements. *Intent is to provide flexibility in alternatives for demonstrating compliance, once Allocation Protocol establishes the allocation process.*

Review of stakeholder comments: Operating characteristics

- How can forbidden zones within resources' operating ranges be recognized, or state changes for what are physically MSG resources?
CAISO functionality will need the future, broader jointly owned unit stakeholder initiative. Converting to pseudo-ties does not need to change current operations.
- What are minimum general requirements or examples of acceptable, and insufficient/unacceptable, treatment of minimum load and start-up costs? *Start-up and minimum load costs should be equitably allocated in proportion to costs, documented in Allocation Protocol, sum of the shares should not exceed total costs, and protocol must identify compliance monitoring.*

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	July 10, 2020
Stakeholder Conference Call	July 17, 2020
Comments Due	July 31, 2020
Draft Tariff Language & Final Proposal (tentative)	July-August 2020
Stakeholder Call (tentative)	August 2020
Comments Due (tentative)	August 2020
EIM Governing Body & CAISO Board of Governors	September 2020
Implementation	Q1 2021

Next Steps

- Comments template available on the initiative webpage: <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 July 31