

Storage as a Transmission Asset

Stakeholder Comment Template

Submitted by	Company	Date Submitted
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Please use this template to provide your comments on the Storage as a Transmission Asset stakeholder initiative Straw Proposal that was published on May 18, 2018.



Submit comments to InitiativeComments@CAISO.com

Comments are due June 7, 2018 by 5:00pm

The straw proposal, posted on May 18, 2018, as well as the presentation discussed during the May 24, 2018 stakeholder web conference, may be found on the [Storage as a Transmission Asset](#) webpage.

Please provide your comments on the Straw Proposal topics listed below, as well as any additional comments you wish to provide using this template.

The San Diego County Water Authority (Water Authority) and City of San Diego (City) appreciate the opportunity to provide comments and thank CAISO for its continued stakeholder engagement on Storage as a Transmission Asset (SATA).

Scope of policy examination

The ISO has modified its initial identified scope for this stakeholder process. The scope of this initiative will focus on: If storage is selected for cost-of-service-based transmission service, how could that resource also provide market services to reduce costs to end-use consumers? Please provide comments on this proposed scope (including those issues identified as out-of-scope). If there is a specific item not already identified by the ISO that you believe should be considered, please provide the specific rationale for why the ISO should consider it as part of this initiative.

Comments:

The Water Authority and City support the proposed scope of policy examination. The Water Authority and City believe it is important that SATA resources be able to earn market revenues. This will help to create incentives for investments in much needed bulk storage systems and for market forces, over time, to help guide California’s approach to storage and reliability.

Background and the ISO’s Transmission Planning Process (“TPP”)

The ISO has provided a discussion on how certain stakeholder comments could be addressed within the current Transmission Planning Process (TPP) framework – on a case-by-case basis. Please provide any additional questions or clarifications regarding how the ISO’s TPP might incorporate the market participation by SATA resources.

Comments:

The Water Authority and City suggest that a full economic analysis be done as part of the Transmission Planning Process (TPP) to include market revenue forecasts and the potential to reimburse ratepayers for the cost of these SATA resources. The Water Authority and City understand that the TPP is excluded from this process, but since the SATA process overlaps it may be helpful to include this full economic analysis as a separate scope to the TPP or on a limited basis adding some of the analysis to the SATA initiative.

When it comes to calculating the “transmission benefits” of a SATA project, in addition to the standard benefits, such as the avoidance of all specific transmission projects that would be required to address reliability concerns mitigated by the SATA project, CAISO should consider the benefits that are not captured via all standard calculation methods. For example, the Water Authority and City recommend that when calculating the “transmission benefits” for a SATA project, the ratepayer benefits of reduced renewable curtailments that are partially captured via TEAM, be fully evaluated and accounted for in the calculation of the project’s benefit.

The Water Authority and City also suggest that the TPP give close attention to the complementary and distinct attributes of smaller battery and large bulk storage projects. While the Straw Proposal notes that two relatively small-scale battery storage projects have been approved for inclusion as SATA projects, the CAISO Bulk Energy Case Study (Shucheng Liu, November 2015) suggests large-scale, long duration projects such as pumped storage will also be needed and should be included explicitly in the TPP.

Small and large-scale SATA technologies are distinct and noncompeting, but they do have vastly different funding sources that require, in the case of pumped storage, firm revenues for financing. In addition, large-scale technologies help provide massive integration of renewables, curtailment avoidance, California’s greenhouse gas goals and grid reliability and resiliency. The TPP modeling should be updated to include the full capabilities of large-scale SATA resources such as pumped storage.

Contractual Arrangement

The ISO proposes to develop a new agreement with SATA resource owners that captures elements from Participating Generator Agreement (PGA), Participating Load Agreement (PLA), Reliability-Must-Run (RMR) agreement and Transmission Control Agreement (TCA). Additionally, the ISO has indicated its preference to control SATAs when they operate as transmission assets. Please provide comments on this proposal.

Comments:

The Water Authority and City agree with CAISO on a new, separate, and customized agreement with SATA resource owners. This agreement should include accounting standards to prevent double recovery and conformance with FERC policy on market participation while receiving rate base cost recovery.

Market Participation

The ISO provided additional details regarding how and when SATA resources would be permitted to provide market services and access market revenues. Please provide comments on this proposal.

Comments:

The Water Authority and City find that the Straw Proposal is vague when it comes to how market revenues will be shared. Understanding that CAISO may be averse to an arrangement that allows project owners to keep all market revenues because that may misalign risks and rewards, the Straw Proposal also suggests the opposite extreme that all market revenues will be credited against firmer CAISO revenues to the project. That arrangement may be counterproductive because it could eliminate incentives for project owners to configure and operate their projects in ways that maximize market revenues. A variety of other mechanisms, such as pre-arranged splits or sliding scales, could align incentives.

The Water Authority and City agree with CAISO that the asset would not qualify for market revenues at time periods when the asset is fully at the control of the system operator for providing reliability service, and it should be the responsibility of the storage asset to address the financial ramifications of non-market participation as part of the project owners overall market revenue. Given that typical reliability conditions for which transmission projects are developed are truly rare events (i.e., peak load combined with coincident loss of one or more transmission elements), the Water Authority and City do not agree that a SATA designated storage asset exclusion for providing market services should be based on long-term reliability studies which are, by design, based on very conservative assumptions. Instead, SATA designated storage assets should be allowed to provide market services at all times subject to full or

partial recall based on determination of the need by the CAISO or PTO operations engineering group, which will typically be in the week to day ahead time frame based on a more accurate and realistic assessment of system conditions in that shorter timeframe.

Cost Recovery Mechanism

The ISO has proposed two alternative cost recovery mechanisms in the straw proposal:

1. Full cost-of-service based cost recovery with energy market crediting
2. Partial cost-of-service based cost recovery with no energy market crediting

Please provide comments on these two options and any other options the ISO has not identified. Please include how the ISO might incentivize or compel SATAs to participate in the markets competitively and efficiently where they would receive full cost-based recovery.

Comments:

The Water Authority and City strongly support Option 1, full cost-of-service based cost recovery with energy market crediting. This approach would allow investments in large scale, long-duration energy storage projects while also providing a mechanism to help lower the cost of transmission services to ratepayers.

To help SATA operators participate in the market competitively and efficiently the incentive structure should allow some portion of the revenue to be kept by the operator. This is important because if revenues are anticipated to be unpredictable, there needs to be some revenue incentive in the agreement between the SATA operator and CAISO to ensure the resource is maximized to the best of its use. More importantly this approach provides a predictable revenue stream for investors looking to finance large scale projects such as pumped storage.

As the bulk storage market emerges in California, there may be the opportunity to shift to other cost recovery mechanisms. The Water Authority and City suggest CAISO evaluate this potential in a forward-looking way on a periodic basis.

Allocation to High- or Low-Voltage TAC

The ISO proposes to maintain the current practice of allocating costs to high- or low- voltage TAC, based on the point of interconnection, and consistent with other transmission asset classifications to regional (high voltage) or local (low voltage) TAC. Please provide comments on this proposal.

Comments:

The Water Authority and City support allocating costs based on high or low voltage TAC. However, the Water Authority and City suggest CAISO consider the special value that high voltage interconnected resources can provide in allowing massive integration of renewables onto the grid. These resources help with the achievement of California's Renewable Portfolio Standard and its ambitious greenhouse gas

targets and should be compensated as such because these resources require firm revenue sources for financing.

Consistent with FERC Policy Statement

The ISO believes the straw proposal is consistent with the FERC Policy Statement. Specifically, that the straw proposal does not inappropriately suppress market prices, impact ISO independence, nor result in double recovery of costs. Please provide comments on the whether you agree or disagree with the ISO. If you disagree, please clarify why and how the ISO might address this issue.

Comments:

The Water Authority and City agree that the proposal is consistent with the FERC Policy Statement and allows CAISO to maintain its independence and role as an independent system operator. To avoid issues with suppressing market prices and double recovery of costs, CAISO will need to allow a flexible path with regards to creating rules that clearly describe how SATA resources participate in the market so adjustments can be made for SATA resources as markets mature.

Use Cases

Stakeholders raised numerous scenarios involving a storage device being used as a transmission asset, and with having additional storage or other generation capacity at the same site. The ISO provided feedback on how some, but not all, of these concerns expressed at the stakeholder session could be addressed. The ISO seeks stakeholder feedback on issues or concerns that would need to be addressed, as well as possible mechanisms to address such concerns.

Comments:

The Water Authority and City understand that at times market revenues may distort the lines between transmission, storage and generation. The Water Authority and City strongly suggest that CAISO maintain a flexible platform moving forward because many of the market-oriented benefits and revenues may come from activities that could be viewed as generation.

EIM classification

The ISO believes this initiative falls outside the scope of the Energy Imbalance Market (EIM) Governing Body's advisory role. The ISO seeks stakeholder feedback on this proposed decisional classification for the initiative.

Comments:

The Water Authority and City do not have any comments on EIM classification at this time.

Other

Please provide any comments not addressed above, including any comments on process or scope of the Storage as a Transmission Asset initiative, here.

Comments:

The Water Authority and City thank CAISO for its consideration of their comments and look forward to continued engagement in the SATA stakeholder initiative.