

# Storage as a Transmission Asset

## Stakeholder Comments 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 Issue Paper that was published on March 30, 2018.



Submit comments to [InitiativeComments@CAISO.com](mailto:InitiativeComments@CAISO.com)

**Comments are due April 20, 2018 by 5:00pm**

The Issue Paper posted on March 30, 2018, as well as the presentation discussed during the April 6, 2018 stakeholder web conference, may be found on the [Storage as a Transmission Asset](#) webpage.

Please provide your comments on the Issue Paper topics listed below and any additional comments you wish to provide using this template.

### **Scope of policy examination**

The ISO's initial identified scope for this stakeholder process is to enable storage to provide cost-based transmission services and participate in the market and receive market revenues. Specifically, the ISO will focus on (1) transmission-connected storage only and (2) storage resources identified as needed to provide reliability-based transmission services. Please provide comments on the proposed scope. If there are specific items not already identified by the ISO that you believe should be considered, please provide specific rationale for why the ISO should consider it as part of this initiative.

### **Comments:**

ORA requests that the CAISO include within the scope of the Storage Acting as Transmission Asset (SATA) initiative an evaluation of the impact of the Federal Energy Regulatory

Commission’s (FERC) February 15, 2018, Order 841, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*.<sup>1</sup> While it appears that the provisions of Order 841 may apply to energy storage assets within the scope of this initiative, the CAISO’s response to ORA’s question regarding the cost of energy dispatched from a SATA during the April 6, 2018 stakeholder call was not definitive.

Order 841 determined that the cost of energy for charging an electrical storage resource (ESR) and for energy dispatched from an ESR be set at a Locational Marginal Price (LMP), and that applicable transmission costs be applied to ESRs.<sup>2</sup> The value of the energy ESR provides to the transmission system depends on the location of that ESR. Similarly, the costs to develop and interconnect ESRs to the transmission system also depend on the location of the ESRs.

Therefore, ORA recommends confirming that all options considered in this stakeholder process are compliant with Order 841 and other applicable FERC Orders. Specifically, cost recovery options should ensure that the costs of energy for charging and dispatching energy from ESRs are based on the LMP, and that applicable transmission costs apply to the dispatch of energy from ESRs when this energy is for the provision of market services.

#### **Cost recovery mechanism**

The ISO has offered two alternative cost recovery mechanisms for discussion as part of the issue paper:

1. Asset in PTO’s TAC rate base, and
2. Contractual provision of “cost-based” transmission service without becoming a PTO.

Please provide comments on these two options and any other options the ISO has not identified. Additionally, please provide comments on the “wholly in rate base” and “partially in rate base” alternatives discussed within each of the above options.

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<sup>1</sup> 162 FERC ¶ 61,127,18 CFR Part 35, issued in Docket Nos. RM16-23-000; AD16-20-000, rehearing granted.

<sup>2</sup> For example, Order 841 requires the following:

- (1) The sale of electric energy from Regional Transmission Operator/Independent System Operator (RTO/ISO) markets to an electric storage resource that the resource then resells back to those markets must be at the applicable wholesale nodal locational Marginal Price (LMP). (PP 4 & 289).
- (2) Applicable transmission access charges for single node resources must be applied to electric storage resources, except when they are being dispatched to provide a service in an RTO/ISO market (such as frequency regulation or a downward ramping service). (PP 293).
- (3) Electric storage resources must submit to the RTO/ISO in which they participate information about their physical and operational characteristics as determined by the RTO/ISO (P 190): State of Charge Minimum State of Charge, Maximum State of Charge, Minimum Charge limit and Maximum Charge Limit. (P 206).

**Comments:**

Under both options, SATA would be under the CAISO’s operational control.

**1. Asset in Participating Transmission Owner’s (PTO) Transmission Access Charge (TAC) rate base.** If an asset is in a PTO’s rate base, then all or portion of its SATA’s Transmission Revenue Requirement (TRR) would be recovered through the TAC. The CAISO presented two cost recovery possibilities under this option, which are as follows:

(a) The “wholly in rate base” option guarantees that a PTO is compensated 100% for its SATA’s TRR through the TAC.<sup>3</sup> In addition, this option allows the SATA to provide market services with at least two restrictions. First, as stated, the CAISO would have operational control of the SATA and could constrain or narrowly define the operation of the SATA. To this end, the CAISO may, if necessary, require the SATA to abstain from market participation and remain fully charged so that it is solely available to meet a transmission contingency need for example.<sup>4</sup> The CAISO would also have the ability to allow the SATA to participate in the market as often as possible without putting the transmission functions of the SATA at risk.

The second restriction requires that any revenue the SATA receives for the provision of energy market services be treated solely as a revenue offset. This offset would reduce the TRR otherwise required through the TAC obligation for the cost of transmission services described above.<sup>5</sup>

ORA prefers the “wholly in rate base” option over the “partially in rate base” option because it could reduce ratepayer TAC obligations for SATA, thereby achieving lower costs for reliability problems addressed with SATA. This option would also result in optimal utilization of SATA for reliability and market grid services.

(b) The “partially in rate base” option guarantees that a portion of the revenue requirement for an ESR<sup>6</sup> is recovered through TAC for its cost of service as a transmission asset.<sup>7</sup> The ESR owner would rely on revenues received from market services to cover the remainder of its revenue requirement.<sup>8</sup> Under this option, the TAC obligation for an ESR would not be reduced by any market service revenue received, even if the revenue received from market

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<sup>3</sup> *Storage as a Transmission Asset Issue Paper*, March 30, 2018, CAISO, (SATA Issue Paper) p. 11.

<sup>4</sup> SATA Issue Paper, p. 7.

<sup>5</sup> SATA Issue Paper, p. 11.

<sup>6</sup> ORA refers to storage as an Electric Storage Resource (ESR) for the “partially in rate base” and “cost-based transmission service” options rather than as SATA because under these options an ESR selected for transmission services would also have other and possibly multiple uses, and it is not clear at this time how the CAISO would control these ESR to ensure they provide the needed transmission services.

<sup>7</sup> SATA Issue Paper, p. 12.

<sup>8</sup> SATA Issue Paper, p. 12.

services exceeds the portion assumed to be covered by market services revenue.<sup>9</sup> The ESR owner would determine the portion of its costs that would be recovered through market services revenue.<sup>10</sup>

ORA agrees with the CAISO that this option requires that the selection criteria for the SATA be based on the proposed portion of TAC recovery as well as the financial status and market-experience of the ESR owner to determine the viable candidates for this option.<sup>11</sup> It also is not clear under this option how the CAISO would control the operations of the ESR to ensure that necessary transmission services are available when needed, or how the CAISO would compare a proposed portion of TAC due to the ESR’s PTO to the other possible transmission asset solution costs. As proposed, ORA does not support the “partially in rate base” option because ESR owner criteria must be defined and possible transmission service risks must be identified and addressed.

**2. Contractual provision of “cost-based” transmission service without becoming a PTO.** As written, ORA does not support this option for the same reasons that it does not support the “partially in rate base” option. Under this option, it is not clear how the CAISO would control the operations of the ESR to ensure that necessary transmission services are available, or how the CAISO would compare the TAC for cost-based transmission services for an ESR with the cost of other possible transmission asset solutions.

#### **Allocation to high or low voltage TAC**

The ISO has expressed its plans to maintain the current practice of allocating costs to high or low voltage TAC based on the point of interconnection. Please provide comments on this proposal.

#### **Comments:**

ORA supports maintaining the current practice of allocating TAC costs to either high voltage (200 kilovolts (kV) or greater), or low voltage (less than 200 kV) TAC based on the ESR’s point of interconnection on the CAISO controlled grid.

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<sup>9</sup> SATA Issue Paper, p. 12.

<sup>10</sup> SATA Issue Paper, p. 12.

<sup>11</sup> SATA Issue Paper, p. 12.

**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:**

Regardless of the model for cost recovery ORA supports the use of competitive solicitations to select a storage asset to resolve a reliability problem. Competitive solicitations promote the selection of least cost solutions, but as the CAISO points out, competitive solicitations apply only to projects connected at 200 kV or higher, unless the project would be an upgrade to an existing facility. The existing CAISO tariff does not require competitive solicitations for projects connected at less than 200 kV because projects at less than 200kV are generally considered low voltage facilities. In contrast to the costs of high voltage facilities, which are shared, the costs for low-voltage facilities are paid by Investor Owner Utilities' (IOUs) specific customers; these IOUs keep the associated revenues, and these revenues are not shared with other PTOs.<sup>12</sup>

ORA recommends that the CAISO develop and present in a stakeholder meeting the terms and conditions that would govern how, and under what conditions, the ESR would bid into the market as a CAISO controlled resource. Stakeholders should have the opportunity to review the proposed terms and conditions in advance of CAISO's approval of these terms and conditions.

ORA supports future consideration of ESRs as solutions for policy and economic transmission projects if ESRs have demonstrated the capacity to meet the criteria and need for these projects and are the cost efficient and financially secure options.

If you have any questions regarding this submittal, please contact Kanya Dorland at [Kanya.Dorland@cpuc.ca.gov](mailto:Kanya.Dorland@cpuc.ca.gov) or (415) 703-1374.

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<sup>12</sup> SATA Issue Paper, p. 9.