

# Storage as a Transmission Asset

## Stakeholder Comment Template

Submitted by	Company	Date Submitted
Kanya Dorland <a href="mailto:Kanya.Dorland@cpuc.ca.gov">Kanya.Dorland@cpuc.ca.gov</a>	Public Advocates Office	November 6, 2018
Fidel A. Leon Diaz <a href="mailto:Fidel.Leon.Diaz@cpuc.ca.gov">Fidel.Leon.Diaz@cpuc.ca.gov</a>		

Please use this template to provide your comments on the Storage as a Transmission Asset second revised straw proposal that was posted on October 16, 2018.



California ISO

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

**Comments are due November 6, 2018 by 5:00pm**

The second revised straw proposal, posted on October 16, 2018, as well as the presentation discussed during the October 23, 2018 stakeholder meeting, may be found on the [Storage as a Transmission Asset](#) webpage.

Please provide your comments on the second revised straw proposal topics listed below, as well as any additional comments you wish to provide using this template.

**Cost Recovery Mechanism**

The ISO has proposed three 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
3. Full cost-of-service based cost recovery with partial market revenue sharing between owner and ratepayer

Additionally, the ISO envisions two potential scenarios for option 1: Direct assigned SATA projects and 2) when the project sponsor bids into TPP phase 3 competitive solicitation process, selecting this option. The ISO has proposed the rules governing SATA bidding and cost recovery eligibility would differ slightly between these two scenarios. Please provide comments on these three options, including the two scenarios under option 1 and any other options the ISO has not identified.

**Comments:**

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates), formerly the Office of Ratepayer Advocates<sup>1</sup> continues to support consideration of the three proposed cost recovery option mechanisms for Storage as a Transmission Asset (SATA), which are:

- Option 1: Full cost of service recovery for the SATA asset entirely from the Transmission Revenue Requirement (TRR), with any revenues from market participation credited back to ratepayers.
- Option 2: Partial cost of service recovery for the SATA asset from the TRR and partially through revenues from market participation, with no market revenues shared with ratepayers.
- Option 3: Full cost of service recovery for the SATA asset from the TRR, with revenues from market participation shared between SATA owners and ratepayers.

The Public Advocates Office recommends that all three SATA cost recovery options be available for all SATA resources proposed in Phase 3 of the 2018-2019 Transmission Planning Process (TPP), if feasible, and for future TPPs. These SATA cost recovery options should be available for both reliability and economic transmission projects,<sup>2</sup> including those that do not involve competitive solicitations. Offering all three SATA cost recovery options for reliability and

---

<sup>1</sup> The Office of Ratepayer Advocates was renamed the Public Advocates Office of the California Public Utilities Commission pursuant to Senate Bill No. 854, which was signed by the Governor on June 27, 2018 (Chapter 51, Statutes of 2018).

<sup>2</sup> In its Second Revised Straw Proposal, the CAISO states that it will “consider energy storage to meet economic-driven transmission needs when the solution reduces congestion,” p. 12.

economic transmission projects should result in lower costs to ratepayers. The following are the Public Advocates Office’s additional considerations for SATA cost recovery Options 1, 2 and 3.

Cost Recovery Option 1: The Public Advocates Office supports considering methods to incentivize SATA owners to participate in the market if they choose cost recovery Option 1, as these incentives would lower transmission costs for ratepayers. The proposal to establish a Must Offer Obligation (MOO) for discharging a storage asset that considers possible market price suppression impacts is a good starting point.<sup>3</sup> The Public Advocates Office requests that a MOO for charging a storage asset that considers possible market suppression impacts should also be consider for Option 1.

The Public Advocates Office also recommends that the CAISO develop settlement protocols to ensure net revenues are properly captured and settled against the cost of the SATA resource.

Cost Recovery Option 2: The cost of service recovered through the TRR for this option should not exceed 90 percent.<sup>4</sup> However, the Public Advocates Office recommends that this percent threshold should be subject to further CAISO stakeholder discussion on whether or not this percent of costs recovery should be less or established as 80, 85, or 90 percent. This level of cost recovery could also be revised at a later date using data from the recommended SATA outcome report further described in these comments under the “Other” section.

Cost Recovery Option 3: The market revenue split between ratepayers and SATA owners for this option should provide ratepayers no less than 50 percent of the total market revenue.<sup>5</sup> A “market revenue threshold”<sup>6</sup> is unnecessary under Option 3 as long as ratepayers receive no less than 50 percent of any market revenues generated by a subsidized asset.

#### SATAs Assigned to Participating Transmission Owners

The CAISO clarified that SATA projects that would be connected to low voltage transmission (200 kilovolt (kV) or less) would be directly assigned to Participating Transmission Owners (PTOs). For this reason, the CAISO recommends that SATAs directly assigned to PTOs only be

---

<sup>3</sup> SATA 2<sup>nd</sup> Revised Straw Proposal, p. 21.

<sup>4</sup> 80, 85, and 90 percent are meant to be examples of what a “substantial portion” could be. The CAISO and SATA stakeholders have agreed that a scenario in which a SATA bids with cost recovery Option 2 requesting that 99.99 percent of the total SATA costs be recovered through the costs of service should be avoided. In prior comments, the Public Advocates Office has suggested that SATAs that bid Option 2 cannot have more than 90 percent of their costs covered by the TRR.

<sup>5</sup> Other parties also support this proposal. See: NextEra Energy’s comments on the SATA Revised Straw Proposal, September 6, 2018, p. 5, ITC Grid Development’s (ITC)’s comments on the SATA Revised Straw Proposal, September 4, 2018, p. 4, California Energy Storage Alliance’s (CESA) comments on the SATA Revised Straw Proposal, September 4, 2018, p. 9, and Southern California Edison’s (SCE)’s comments on the SATA Revised Straw Proposal, September 4, 2018, p. 5.

<sup>6</sup> Market revenue threshold refers to the CAISO’s proposal for cost recovery Option 3 where a specific dollar amount of the market revenue must first be allocated to ratepayers before the market revenue can be split between ratepayers and the resource owner. See SATA 2<sup>nd</sup> Revised Straw Proposal, p. 24.

permitted to utilize Option 1 cost recovery. At this time, the Public Advocates Office supports the consideration of all proposed SATA cost recovery options for all SATA projects directly assigned to PTOs if they are the least-cost option and meet the applicable specified parameters for cost recovery Options 2 or 3 stated above.

### **Options in the event of insufficient qualified project sponsors**

The ISO proposal would require all SATA projects sponsors to also submit a full cost-of-service bid as described in option 1, above. This bid would to be used in instances when there is fewer than three qualified project sponsors.

Please state your organization’s position as described in the Second Revised Straw Proposal (support, support with caveats or oppose). If you support with caveat or oppose, please further explain your position and include examples.

#### **Comments:**

SATAs should receive the same consideration that transmission wire developers receive in TPP competitive solicitations.

As previously stated in the Public Advocates Office’s September 6, 2018 comments on the Revised SATA Straw Proposal, “If there are insufficient qualified responses to transmission service need requests, the [Center for Renewables Integration] CRI<sup>7</sup> and the Department of Market Monitoring (DMM)<sup>8</sup> have observed that it is the CAISO’s practice to allow qualified applicants to be selected if they accept binding cost caps. Consistent with this practice, the Public Advocates Office recommends that the CAISO require binding costs caps when there are insufficient qualified responses if the qualified SATA chooses the SATA cost recovery Options 1, 2 or 3.”<sup>9</sup>

If a SATA developer is willing to accept a binding cost cap, then the SATA developer should be allowed to select any of the SATA cost recovery options available as long as bids are consistent with the stated specified cost recovery parameters.

Additionally, if the CAISO receives only one SATA bid seeking cost recovery either under Option 2 or Option 3, and the SATA bid does not meet the stated parameters under the Cost Recovery Mechanism section noted above, then the CAISO should reject these bids and hold

---

<sup>7</sup> CRI Comments on the Storage as a Transmission Asset Straw Proposal, June 7, 2018, p. 4.

“The ISO already uses the willingness of parties to accept a binding cost cap as a criterion in the competitive transmission sponsor selection process.”

<sup>8</sup> DMM Comments on the Storage as a Transmission Asset Straw Proposal, July 17, 2018, p. 1.

<sup>9</sup> Public Advocates Office comments on the CAISO’s Storage as a Transmission Asset Revised Straw Paper, September 6, 2018, p. 6.

another solicitation with broader reach and greater response timeframes to obtain more proposals from qualified project sponsors.

### **Contractual Arrangement**

The ISO proposes to establish defined three contract durations: 10, 20, and 40 years. Additionally, the ISO has eliminated its previously proposed TRR capital credit in favor of contractual requirements for maintenance of the resources.

Please provide comments on these two modifications to the ISO’s proposal, stating your organization’s position as described in the Second Revised Straw Proposal (support, support with caveats or oppose). If you support with caveat or oppose, please further explain your position and include examples.

### **Comments:**

As stated in Public Advocates Office’s September 6, 2018 comments on the Revised SATA Straw Proposal,<sup>10</sup> the Public Advocates Office continues to support SATA agreement durations that are consistent with the life of the storage technology.<sup>11</sup> The CAISO’s proposal to provide 10- and 20-year contract durations in addition to its original 40-year contract option responds to this request.

The Public Advocates Office also requests that agreement terms include extension options if it is determined that the resource is still needed at the end of the agreement and extending the agreement would be the least cost option. Extended agreements should be consistent with the remaining life of the resource or allow for amortization of resource augmentations or replacements.

The Public Advocates Office agrees with the CAISO’s removal of the proposed TRR capital credits in favor of contractual requirements for resource maintenance as previously stated in its September 6, 2018 comments on the Revised Straw Proposal.<sup>12</sup> The Public Advocates Office also recommends consideration of a contract provision that splits the costs of SATA maintenance and replacements between resource owners and ratepayers. Such an option has the potential to lower costs for ratepayers.

---

<sup>10</sup> *Public Advocates Office comments on the CAISO’s Storage as a Transmission Asset Revised Straw Paper*, September 6, 2018, p. 2.

<sup>11</sup> California Energy Commission Tracking Progress, Energy Storage, August 2018, p. 13. “Flywheels can last more than 25 years and can be manufactured from 100 percent recyclable, nonhazardous materials.”

<sup>12</sup> *Public Advocates Office comments on the CAISO’s Storage as a Transmission Asset Revised Straw Paper*, September 6, 2018, p. 3-4.

**Market Participation**

The ISO has proposed that a SATA resource will be provided notification regarding its ability to participate in the market prior to real-time market runs, but after the day-ahead market closes. The ISO will conduct a Load based SATA notification test to determine a SATA resource’s eligibility to participate in the real-time market.

Please state your organization’s position as described in the Second Revised Straw Proposal (support, support with caveats or oppose), including any alternative proposals. If you support with caveat or oppose, please further explain your position and include examples (please note that any alternative proposals should be specific and detailed).

**Comments:**

The Public Advocates Office supports the CAISO’s notification proposal, with caveats. Specifically, the Public Advocates Office seeks clarification on how the CAISO would notify a SATA providing an economic-driven transmission service (e.g. congestion) of its market participation eligibility. Presumably, the location and time of this congestion should be known ahead of time and the SATA could be notified well in advance of its market participation eligibility. Additionally, as stated in its September 6, 2018 comments on the Revised Straw Proposal,<sup>13</sup> the Public Advocates Office recommends that the CAISO further explore the feasibility of providing notifications of market participation further in advance than is currently proposed to make Option 2 a more viable option. To allow SATA developers to seek financing for the cost recovery Option 2, providing possible market participation time-frames in the Request for Proposed transmission solutions and or one year in advance is preferred.

**Consistent with FERC Policy Statement**

The ISO believes the revised 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 state your organization’s position as described in the Second Revised Straw Proposal (support, support with caveats or oppose). If you support with caveat or oppose, please further explain your position and include examples. If you oppose, please clarify why and how the ISO might address this issue.

---

<sup>13</sup> As stated in prior SATA initiative comments submitted on September 6, 2018, “[t]o improve the CAISO’s proposed SATA market participation notification time-frames,<sup>13</sup> the Public Advocates Office supports the CAISO’s ongoing Transmission Planning Process special studies including studies on generation retirements and grid impacts of renewable integration and growth in Distributed Energy Resources (DERs).”

**Comments:**

As stated in the Public Advocates Office’s prior SATA initiative comments on September 6, 2018, “[w]ithout greater specificity on the terms and conditions in the agreements for SATA resources, the Public Advocates Office cannot determine whether the proposed SATA policy is consistent with the FERC Policy Statement ‘Utilization of Electric Storage Resources for Multiple Services When Receiving Cost-Based Rate Recovery,’ which was issued on January 19, 2017.<sup>14</sup> However, to ensure that there is no violation of the FERC’s Policy Statement, such as the CAISO’s independence as a market operator, the CAISO’s settlements should clearly reflect when the charging and discharging activities of a SATA are in response to the CAISO’s transmission dispatch instructions or when these activities result from SATA operator decisions. With this information, the DMM would be able to monitor the CAISO’s independence as a market operator.”<sup>15</sup>

The Public Advocates Office also seeks clarifications on the CAISO’s proposal for mitigating suppression of market prices, specifically the “setting of the discharge price at the 95% level at a given location”<sup>16</sup> for the Option 1 MOO proposal and requests an explanation on how the CAISO’s proposal will achieve this claimed purpose. The Public Advocates Office would also like clarification on how the CAISO intends to mitigate the suppression of market prices for SATA resources that select cost recovery Options 2 and 3.

**Draft final proposal meeting or phone call**

The stakeholder meeting for the second revised straw lasted approximately 2.5 hours. As a result, the ISO requests stakeholder feedback regarding whether an in-person meeting is necessary for draft final proposal or if a stakeholder phone call will allow the ISO to adequately address the remaining issues in the draft final proposal.

Please state your organization’s position as described in the Second Revised Straw Proposal (support, support with caveats or oppose). If you support with caveat or oppose, please further explain your position and include examples.

---

<sup>14</sup> *Utilization of Electric Storage Resources for Multiple Services When Receiving Cost-Based Rate Recovery*, 158 FERC 61051 2017 at <https://www.ferc.gov/whats-new/comm-meet/2017/011917/E-2.pdf>.

<sup>15</sup> *Public Advocates Office comments on the CAISO’s Storage as a Transmission Asset Revised Straw Paper*, September 6, 2018, p. 7.

<sup>16</sup> SATA 2<sup>nd</sup> Revised Straw Proposal, p. 21.

**Comments:**

The Public Advocates Office requests that the next SATA stakeholder meeting include more time for stakeholder discussion and questions. For this reason, the CAISO should schedule the next stakeholder meeting for at least a four-hour time frame.

**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:****SATA Outcome Report**

The Public Advocates Office recommends that the CAISO prepare a report three years after the first SATA project has been approved and is in operation. This report should summarize the SATA cost recovery options selected and the impacts of market participation on cost of service recovery. Such a report would allow stakeholders to review whether the SATA cost recovery options are working as intended. To allow for on-going SATA cost recovery monitoring, the CAISO should update the SATA outcome report every three years.

**SATA for Economic Projects**

In prior comments on the Issue Paper for this SATA initiative, the Public Advocates Office<sup>17</sup> along with California Energy Storage Alliance,<sup>18</sup> California Public Utilities Commission,<sup>19</sup>

---

<sup>17</sup> *Public Advocates Office comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 5.

<sup>18</sup> *California Energy Storage Alliance comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 3.

<sup>19</sup> *California Public Utilities Commission comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 2.

Center Renewable Integration,<sup>20</sup> LS Power,<sup>21</sup> Next ERA,<sup>22</sup> Sempra,<sup>23</sup> EDF Renewables,<sup>24</sup> and Nevada Hydro Company<sup>25</sup> requested that that CAISO consider SATAs for economic transmission projects and or for upgrades required for the economic relief of transmission congestion. The Public Advocates Office continues to support the inclusion of economic projects in this SATA initiative, because this inclusion could potentially reduce ratepayers' costs. There have been recent advances in battery technologies that would allow them to reduce transmission congestion along with addressing other transmission needs.<sup>26</sup>

---

<sup>20</sup> *Center for Renewables Integration comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 3.

<sup>21</sup> *LS Power comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 2.

<sup>22</sup> *NextERA Energy comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 1.

<sup>23</sup> *Sempra Renewables comments on the CAISO's Storage as a Transmission Asset Issue Paper*, April 20, 2018, p. 2.

<sup>24</sup> *EDF Renewables comments on the CAISO's Storage as a Transmission Asset Straw Proposal*, June 7, 2018, p. 1.

<sup>25</sup> *Nevada Hydro Company Inc. comments on the CAISO's Storage as a Transmission Asset Straw Proposal*, June 6, 2018, p. 2.

<sup>26</sup> *California Energy Commission Tracking Progress, Energy Storage*, August 2018, p. 13.

"If a 100 MW/400 MWh flywheel were installed by the California IOUs, then California ratepayers could potentially realize \$17.5 million per year in congestion savings alone. Other energy storage technologies, such as lithium-ion batteries, can perform only one cycle a day, resulting in one-third of the savings compared to an Amber Kinetics flywheel."