



Submit comment on Draft final proposal

Initiative: Energy storage enhancements

1. Please provide a summary of your organization's comments on the Draft Final Proposal. *

Choose:

- Support
- **Support with caveats**
- Oppose
- Oppose with caveats
- No position

The California Energy Storage Alliance (CESA) appreciates the opportunity to provide feedback to the California Independent System Operator (CAISO or ISO) on the Energy Storage Enhancements (ESE) Draft Final Proposal (DFP). Through ESE, the CAISO has actively incorporated stakeholder feedback regarding the scope, focus, and overall policy direction of this initiative. CESA is particularly thankful of the ISO's consideration of improvements to their state-of-charge exceptional dispatch (SOC ED) and electable co-located functionality proposals.

While CESA is generally supportive of the DFP, we are still materially concerned with the ISO's position regarding requiring storage assets to submit accompanying energy bids while providing regulation. Thus, in these comments CESA urges the ISO to provide additional clarity on the potential implications of applying both of their proposals regarding ancillary services (AS), to consider improvements to the approach by which the SOC formulae will be enhanced, and reevaluate the application, magnitude, and duration of their bid-requiring proposal based on the information shared to stakeholders. As such, CESA supports the DFP with caveats and looks forward to working with stakeholders and the ISO to enhance the AS proposals included herein.

The ISO should provide additional information and numerical examples detailing the expected impacts of both AS proposals, as well as their potential interactions with other applicable mechanisms

In the DFP, the ISO notes that it has encountered situations in which storage assets that have AS awards, particularly regulation, are unable to meet said awards. The ISO underscores that this can be due to the storage resource having insufficient SOC, which would force a no-pay within the real-time market's AS award and a rescission of the day-ahead AS payment, resulting in incremental ancillary services procurement in the 15-minute market. The ISO proposes two distinct measures to ensure the feasibility and provision of AS from storage assets. First, the ISO proposes an enhancement to the equation that governs SOC so that the impact of AS awards is reflected. Second, the ISO would require that storage resources have availability of economic bids for energy while providing regulation up or regulation down.

CESA understands the importance of ensuring an adequate and reliable supply of AS. Moreover, CESA supports the CAISO's exploration of alternatives that would minimize the likelihood of communicating unfeasible dispatch instructions to energy storage assets. So far, CESA has been of the position that enhancing the formulae that govern SOC is a more lasting solution as it addresses a fundamental deficiency directly. Noting this, it has proven difficult for CESA, a stakeholder that is not a market participant, to assess the potential financial impacts of each of these proposals separately, as well as their joint effects. To this end, CESA requests the ISO produce a set of numerical examples showing how a single scenario would be affected by each of these proposals separately and both of them together. Importantly, these numerical examples should also cover interactions with other relevant market features and requirements, such as the end-of-hour (EOH) SOC parameter, the SOC requirements for AS awards within the day-ahead (DA) and real-time (RT) markets, the minimum SOC (MSOC) requirement, and the SOC ED.

Incorporating the impact of regulation on the SOC calculation is preferred over requiring accompanying energy bids

CESA favors further development of the ISO's proposal to enhance the formulae that currently govern SOC for storage resources. This approach is preferred as it gets to the source of the problem by addressing a fundamental deficiency regarding the ISO's visualization of storage resources today. Enhancing the SOC formulation represents a more lasting approach that would not only mitigate the reliability risks identified by the ISO within the DFP, but more generally improve the modeling and optimization of these resources.

CESA believes that properly enhancing the SOC formulation will obviate the need to require all AS awards for storage resources to be accompanied with bids for energy at a prescribed amount. While CESA recognizes the ISO's relaxation of the proposal, requiring energy bids equal to 50% of the AS award is still overly restrictive. This limitation is not an evidence-based approach since the DFP does not offer an explanation behind the proposed 50%, nor does it explain how it relates to the observed hourly μ values. In this vein, we agree with the concerns shared by Pacific Gas & Electric (PG&E) during the July 7, 2022 stakeholder meeting: the adoption of both of these proposals would be overly burdensome and unduly restrictive. Thus, CESA recommends the ISO pursue improvements to the SOC formulation to better reflect the impacts of regulation by developing hourly μ values per month on a per resource basis.

As stated above, by properly enhancing the SOC formulae the ISO can improve storage optimization in a lasting way. To do so, CESA has urged the ISO to develop hourly μ values per month using data from the past year. We do not believe that using averages across all hours and months to inform the updated SOC formulae is desirable nor is it consistent with the analyses presented by CAISO so far as Appendices to the DFP. Instead, the ISO should develop hourly μ values per month to inform the first set of μ values to be applied to the SOC formula. CESA has recommended that, once applied, these values should be easily accessible and updated on a regular basis. CESA recommends publishing these values in OASIS for visibility and updating these values every 12 months. We welcome ISO input on the optimal regularity of these updates.

In developing these values, CESA has urged the ISO to consider the benefits of developing them on a per-resource basis, not on a system-wide basis. This is desirable as the impacts of regulation on SOC are largely determined by the bidding strategy followed by each asset, as well as the unique marginal costs for each (e.g., cycle life, battery chemistry). In the DFP the ISO notes that developing resource-specific values may be challenging due to limited data. CESA believes that this can be overcome by establishing a data threshold. CESA continues to strongly recommend the ISO explore development of resource-specific hourly μ values per month for resources with at least one year of operational data. For resources with fewer datapoints the general hourly μ values per month

shall be applied. Once resources achieve one full year of operational data, resource-specific hourly μ values per month shall be applied.

If despite stakeholder opposition the ISO pursues an energy bid requirement for storage assets with AS awards, the proposal should be applied in a limited fashion and revised in accordance with the μ value study

If, despite the comments offered by CESA and other stakeholders the ISO adopts an energy bid requirement, CESA recommends that it only be applied in the RT market, in accordance with the observations made by PG&E during the August 25, 2022 stakeholder meeting. In addition, CESA urges the ISO to revise the 50% requirement downwards in a manner consistent with the findings of the μ value study. Moreover, consistent with our position that properly enhancing the SOC formulation will obviate the need to require all AS awards for storage resources to be accompanied with bids for energy, the ISO should only implement the energy bid requirement in a temporary basis while enhancements to the SOC formulae are developed, applied, and improved upon. As such, CESA would recommend that, if despite stakeholder opposition the ISO pursues an energy bid requirement for storage assets with AS awards, the requirement should have a clear sunset period, even if the percentage of the requirement is revised downwards.

CESA favors the use of market power mitigation prices in the enhancements proposed to the DA default energy bid (DEB)

During the stakeholder call held on August 25, 2022, some stakeholders inquired about the prices that would be utilized to operationalize the proposed enhancements to the DA DEB formulation. While some parties raised concerns with the use of prices derived from the market power mitigation (MPM) run, CESA holds that these values offer the most transparent source for DEB formulation. As such, CESA opposes the use of prior day's prices in the DA DEB formulation and favors the use of market power mitigation prices.

2. Please provide comments on the EIM Governing Body classification.

Choose:

- Support
- Support with caveats
- Oppose
- Oppose with caveats
- **No position**

CESA does not offer comments at this time.

3. Please provide any additional input not included above related to the Draft Final Proposal.

CESA does not offer additional comments at this time.