



Stakeholder Comments Template

Energy Storage and Distributed Energy Resources Phase 4

This template has been created for submission of stakeholder comments on the Second Revised Straw Proposal and associated March 2 & 3 meeting discussions, for the Energy Storage and Distributed Energy Resources (ESDER) Phase 4 initiative. The paper, stakeholder meeting presentation, and all information related to this initiative is located on the [initiative webpage](#).

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business **March 16, 2020**.

| Submitted by | Organization | Date Submitted |
|-----------------------|-----------------|-----------------------|
| <i>Grant McDaniel</i> | <i>Wellhead</i> | <i>March 13, 2020</i> |

Please provide your organization's general comments on the following issues and answers to specific requests.

Wellhead applauds the CAISO for its thorough examination of energy storage in this initiative. While Wellhead is very supportive of the CAISO proposals, this examination brought to light two very important issues that negatively impacting the ability of energy storage to shift energy and provide net load following. Wellhead believes strongly that these issues need to be addressed as soon as possible, but certainly prior to the bulk of the new 2021 Reliability MWs from energy storage resources come on-line.

- A. The CAISO's SIBR system must differentiate between bids for the first cycle and any subsequent cycle(s). The examination of cycling cost in this initiative clearly showed that the cost for the first cycle of Li-ion batteries, which will account for the bulk of the energy storage in the CAISO system for some time, to be low enough to competitively shift energy for at least a full cycle in every day. In many cases these same batteries could provide an economic shift for additional cycles; however, in the DA market run, SIBR does not have the available fields to allow the market to utilize these additional cycles because there is no way for market participants to supply CAISO with bids for individual cycles. Without this capability, participants are left to bid the cost of cycles 2X or above just to ensure that they get cost recovery. These high bids then render the storage resource un-economic for nearly all energy shifting. Wellhead requests that CAISO provide the ability to offer more than one cycle per day in its DA market as soon as possible.
- B. In the DA market, Wellhead agrees that the CAISO market should optimize on the price spread of a participant's bids regardless of hours bid, unless otherwise constrained. This is

appropriate since all 24 hours are being optimized at once and participants do not have an opportunity to change their bids. However, in the RT market, participants deploy bid strategies that are fluid (manual and/or automated) reacting to real time events while observing their DA awards. These RT bids are placed at specific prices based on prices formed in the DA market for specific hours to account for complex opportunity costs which may go deep into multiple cycles. Given that the RT horizon is limited and given that participants may update their bids, the CAISO's current practice of using spreads in the RT is not appropriate and may lead to negative market outcomes. This ability to re-bid must also be recognized when discussing the minimum charge requirement.

1. Demand Response (DR) ELCC Study Preliminary Results

Please provide your organization's feedback on the Effective Load Carrying Capability (ELCC) study preliminary results for DR resources, as discussed during the March 2 (day 1) stakeholder meeting. Please explain your rationale and include examples if applicable. Please also include any additional study results that would be helpful on this topic.

No Comments

2. Operational Processes and Must Offer Obligations for Variable-Output DR

Please provide your organization's feedback on the proposed operational processes and must offer obligations for variable-output DR, as described within the second revised straw proposal. Please explain your rationale and include examples if applicable.

No Comments

3. End-of-Day State of Charge

Please provide your organization's feedback on the proposed end-of-day state of charge, as described within the second revised straw proposal. Please explain your rationale and include examples if applicable.

Wellhead understands the issues presented by the CAISO for this EOD SOC parameter. As this is an optional bid parameter, Wellhead supports the CAISO making this parameter a minimum value.

4. End-of-Hour State of Charge

Please provide your organization's feedback on the proposed end-of-hour state of charge, as described within the second revised straw proposal. Please explain your rationale and include examples if applicable.

Wellhead fully supports the CAISO's proposal as written. Wellhead does believe the CAISO may still need to work through some nuances with the RTPD/RTD timing and coordination, but otherwise supports.

5. Default Energy Bid for Storage Resources

Please provide your organization's feedback on the proposed default energy bid for storage resources, as described within the second revised straw proposal. Please explain your rationale and include examples if applicable.

Wellhead fully supports the CAISO's proposal as written.

6. Minimum Charge Requirement

Please provide your organization's feedback for inclusion of the minimum charge parameter in the ESDER initiative, and feedback on presented material at the stakeholder meeting on March 3, 2020.

Wellhead supports the intent of this requirement but strongly opposes the proposed implementation. Wellhead strongly believes that any minimum charge requirement (MCR) should not interfere with ability of the market to find market-based solutions. At a practical level this means that if the market has time to resolve a minimum charge deficiency, then the requirement should not be binding. As noted in our opening comments, participants have the ability (and the financial obligation) to bid/schedule in a manner that will cure any charge deficiency. Therefore, any MCR should only apply to that portion that is incapable of being cured due to a lack of time.

7. Additional comments

Please offer any other feedback your organization would like to provide from the straw proposal and topics discussed during the web meeting.

As noted above, Wellhead thanks the CAISO for their work on these important issues, but requests that the additional two issues noted in our opening comments be resolved as soon as possible.