



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>Nuo Tang</i>	<i>SDG&E</i>	<i>3/16/2020</i>

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

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.

SDG&E does not support the DR ELCC proposal at this time. E3's presentation lacks sufficient detail about E3's specific ELCC methodology and inputs. SDG&E requests the CAISO and E3 to provide a detailed write up of the methodology and inputs. Additionally, SDG&E requests the CAISO and E3 to provide a comparison of the ex-ante Protocol compliant load impact estimates along with the appropriate DR ELCC QC output.

At a minimum SDG&E requests that an evaluation be conducted that compares the results from the two E3 proposals and its Load Impact Protocol ("LIP") results. The LIPs have been vetted, are accurate and have been used to establish RA values for more than 10 years for all three IOUs. The E3 presentation conducted its analysis utilizing the "old" RA window assessment hours of 1pm – 6pm and does not accurately describe the ex-ante load impacts. The ex-ante load impacts are required to be provided under specific "peak" weather conditions (1 in 2, and 1 in 10, for both IOU and CAISO). The load impact is averaged over the full RA window which is now 4pm-9pm. Thus, the preliminary E3 study should be updated to reflect the 4pm to 9pm peak load window.

SDG&E contends that a fully vetted analysis is needed in order to accept the ELCC preliminary results for DR resources including a comparison with LIP methodology. Therefore, SDG&E requests for the CAISO to provide additional written details for the ELCC study methodology to allow parties to better understand the analysis.

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.

SDG&E supports the concept of allowing variable-output DR to submit physically available capacity on an hourly basis similar to that of variable energy resources. SDG&E believes the submission of the forecast output on an hourly basis would be a great step towards better optimizing and integrating DR resources into the CAISO markets. SDG&E currently does not see a need to submit real-time forecasts on a 15 or 5-minute basis. However, SDG&E is not opposed to this option as the scheduling coordinator could simply choose to only update forecasts 75-minutes prior to the operating interval. SDG&E understands that the flexibility to submit revised forecasts on a 15 or 5-minute basis would be ideal, but SDG&E would request the CAISO to also consider whether this would introduce additional complexity into the real time market and/or the implementation schedule.

SDG&E is concerned by the CAISO's statement that indicates that CAISO is only considering this option because the local regulatory authority ("LRA") is or should adopt an ELCC methodology for the QC for demand response resources. SDG&E asks whether the CAISO would not proceed with this option if the LRA elects to not adopt an ELCC methodology for the QC for DR?

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.

SDG&E supports the addition of an end-of-day state of charge. An end-of-day state of charge will allow market participants greater ability to manage its energy storage resources and, allow considerations beyond just the day ahead timeframe. While SDG&E supports the end-of-day parameter, SDG&E also requests the CAISO to make this an optional function so that resources may elect to not use the function if there is not a need for daily balancing. SDG&E also recommends that the CAISO consider making the end-of-day state of charge to be a range. This would allow the scheduling coordinator greater ability to position its resources not only to assure energy is available to discharge, but would also allow resources to maintain the ability to have capacity available to charge.

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.

SDG&E supports the End-of-Hour State of Charge concept for the real-time markets and believes the CAISO should explore it further. SDG&E believes the end of hour parameter will better optimize the energy storage device in the real time market. SDG&E does have some questions for the CAISO to consider as it further develops the concept.

- Will the end of hour bid parameter impact the ability for the resource to meet the resource adequacy must offer obligations in real time?
- How would the CAISO's RA Availability Incentive Mechanism account for the bids if a resource bid in a specific end of hour state of charge that may be lower than the must offer obligation for both Flexible and System/Local RA?
- The CAISO provided two constraints such as upper and lower state of charge constraints and ancillary service award constraints. Are there other constraints that have not been presented?

Finally, SDG&E does not believe that the end-of-hour state of charge parameter would be necessary in the day ahead market since that market optimizes for the entire day whereas the real-time market does not.

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.

SDG&E supports simplifying the calculation for estimating cycling costs for storage devices. This simplification should reduce the implementation burden and should be more straightforward for use by the market.

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.

SDG&E supports inclusion of the minimum charge requirement (MCR) parameter in the ESDER 4 initiative. While SDG&E understands why the issue was initially raised in the RA Enhancements initiative, SDG&E believes that it's better suited for this initiative where the focus is on storage resources. ESDER 4 covers a myriad of interconnected issues pertaining to energy storage resources, the focus in the RA Enhancements initiative is on all RA resources not just storage. By including MCR in ESDER 4, stakeholders are given the opportunity to discuss and develop policies for MCR and to understand how those policies will interact with other storage issues, e.g., End of Day and End of Hour state of charge, that are being discussed.

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.