California ISO

Stakeholder Comments Template

Energy Storage and Distributed Energy Resources (ESDER) Phase 4

This template has been created for submission of stakeholder comments on the Issue Paper Working Group Meeting for ESDER Phase 4 that was held on March 18, 2019. 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 **April 1, 2019.**

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

1. **Non-Generator Resource (NGR) model**
   a. SOC management
   b. Multi-interval optimization

CLECA currently does not have any comments on this topic.

2. **Bidding requirements for energy storage resources**

CLECA does not have any comments on the bidding requirements at this time.

CLECA is concerned about the eligibility of bid cost recovery (BCR) for storage resources. Storage does not generate power, but is traditionally used to arbitrage on- and off-peak price differentials. It is unclear under what specific circumstances load, as opposed to the supplier, should bear the risk of price arbitrage and therefore pay BCR to storage. CLECA

recommends a careful review of the principles of the purpose of paying BCR and identification of when storage should be eligible for BCR

3. **Demand Response resources**

   a. DR operational characteristics – Please provide comments on the ISO's proposal for DR resources to reflect a non-zero Pmin.\

   At the working group meeting, several parties' commented that attempting to submit a bid whereby the pmin is very close to the pmax has difficulties for several reasons. First, not all demand response (DR) resources have a flat response shape, so the delivery could vary across hours and there is a limited ability to update pmin values. Second, there is concern about the bidding practice being found improper by the CAISO Department of Market Monitoring. This concern also extends to the use of start-up costs and other bidding parameters to manage how DR resources are utilized in the CAISO market.

   b. Weather sensitive – Seeking feedback on potential forecasting methodologies and approaches for validating SC-submitted forecasts.

   The CAISO is unclear on the problem it wants to resolve regarding weather sensitive DR. The presentation says the "CPUC/LRA must establish an appropriate capacity methodology for weather sensitive DR to count as RA".[1] The CPUC already has an approved methodology known as the Load Impact Protocols (LIP) which are used to establish the capacity and RA value for an annual or monthly peak for the utilities' DR programs, which includes those that are weather sensitive. The LIP has been vetted by the CPUC and outside consultants are utilized to determine the results; there is also independence from the utilities. The CAISO has not documented why the current LIP are no longer appropriate for establishing monthly or annual resource adequacy (RA) values for weather sensitive DR.

[1] CAISO presentation for ESDER4, March 18, 2019, slide 33

It appears CAISO has determined internally that the use of effective load carrying capability (ELCC) approach to determine RA value for weather sensitive DR is superior to the LIP. CAISO has not presented any results of an ELCC study for DR to compare to the results from the LIP. CLECA is only aware of one study that attempted to calculate the ELCC of a weather sensitive DR program, and the results were inconclusive because it produced results that were quite different to the results from the vetted LIP.[2] The study looked at air-conditioning cycling program and the resulting ELCC value was substantially lower than the capacity value from the LIP. The lower results for the ELCC approach did not make sense since air-conditioners are running during system peak conditions therefore the program should have high capacity value. One of the identified issues is the appropriate value for capacity that ELCC should be applied to since DR does not have a nameplate value. CLECA welcomes additional research on ELCC and DR, but the LIP should remain in place for the determination of capacity for RA showing unless and until an alternative approach is demonstrated to be superior.

The operational issues of the must-offer and RA Availability Incentive Mechanism (RA AIM) are well known. Currently, there is a disincentive to show the full DR potential of a weather sensitive DR resource in a monthly supply plan because there would be a replacement obligation during weeks of the month when the weather sensitive DR program cannot deliver its maximum potential. An example is an air-conditioning cycling program. The solution to this operational problem is one the CAISO is already utilizing for other weather sensitive or sun pattern dependent resources such as wind and solar. There is no logical reason for treating weather DR programs differently than wind in solar for RA AIM or providing a forecast of potential load impacts. Weather sensitive DR could be exempt from RA

[2] Louis Linden, Paul D. Nelson, & Gigio Sakota, *Using Effective Load Carrying Capability to Value Demand Response*. June 2018. Presented at the Rutgers Western Conference Advanced Workshop in Regulation and Competition.

AIM and the schedule coordinator can provide a daily forecast of its weather sensitive DR potential. If RA AIM is waived for some DR programs, then CLECA supports a process to review performance of all DR programs. This could be through the LIP process which incorporates past performance. An alternative option is for the provider to provide their own (non-LIP) DR forecast and be subject to financial consequences if the DR provider fails to achieve, within a reasonable tolerance, their forecasted DR when called upon either through a market call or a test.

At the Supply Side Working Group[3], Gil Wong (PG&E), presented a review of the LIP and how the underlying regression model results could be utilized to develop a forecast of DR impacts for operation purposes, instead of the current single 1 in 2 or 1 in 10 capacity value used for the RA program. Therefore, the LIP could form the basis for a schedule coordinator provided forecast for a weather sensitive or time-of-day dependent DR.

From CAISO's presentation at the working group meeting, it is unclear if CAISO is suggesting ELCC be utilized for the determination of a forecast of weather sensitive DR for RA AIM or operational purposes. The CAISO does not utilize ELCC for operational purposes for weather sensitive wind and solar resources and it has not indicated it plans to change from the current practice of utilizing real-time forecasts. If CAISO is suggesting ELCC be utilized for weather sensitive DR for RA AIM or operational purposes, it has not explained the justification of different treatment of weather sensitive resources.

ELCC is typically used as a planning tool for resource evaluation as it is a measure of a resource's ability to avoid a loss of load event (LOLE). It is not used as a forecasting tool for resource deliverability for operational purposes. For example, on a typical spring day when load is moderate and solar resources are producing at maximum output an ELCC valuation for that time period would likely produce zero capacity value because there is

[3] Gil Wong, Pacific Gas and Electric, *DR Load Impact Protocols and RAAIM*., July 17, 2018.

no LOLE to be avoided. However, that does not mean the resource is producing zero output. Therefore, ELCC should not be utilized for operational purposes of a wind and solar forecast, and nor should it be used for a demand response forecast.

In Summary, CLECA recommends the LIP remain in place for the determination of Annual and Monthly RA value for DR. CLECA welcomes research on ELCC for DR, including weather sensitive, but the LIP should remain unless an alternative is determined to produce superior results. For operations, must offer and RA AIM, CLECA recommends weather sensitive DR be treated like other weather sensitive wind and solar resources. The RA AIM could be waived and the schedule coordinator be allowed to provide a forecast. Forecasts would be the result of a local regulatory reviewed forecast process (such as LIP) or if self-provided be subject to financial consequences for failure to provide within a reasonable tolerance of their forecasted DR. Additional research on utilizing the information from the LIP to develop a forecast could be performed in future work in the CPUC DR proceedings.

4. **Discussion on BTM Resources**
   a. Potentially removing 24x7 settlement requirement for non-resource adequacy resources utilizing the DERA/NGR participation model.
   b. Providing a forum for industry stakeholders to discuss potential QC methodologies for multi-tech type DERs for LRA consideration.

CLECA currently does not have any comments on this topic.

5. Additional comments

Please offer any other feedback your organization would like to provide from the topics discussed during the working group meeting.

CLECA currently does not have any comments on this topic.