California ISO

Stakeholder Comments Template

Energy Storage and Distributed Energy Resources Phase 4 – Work Shop

This template has been created for submission of stakeholder comments on the ESDER Phase 4 - Workshop that was held on June 27, 2019. The workshop, stakeholder meeting presentations, and other information related to this initiative may be found on the initiative webpage at:
http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_DistributedEnergyResources.aspx

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **July 11, 2019.**

Submitted by	Organization	Date Submitted
Paul Nelson *Barkovich & Yap, Inc.* *(213) 444-9349*	*California Large Energy Consumers Association (CLECA)*	*11 July 2019*

Please provide your organization's comments on the following issues and questions.

1. Default Energy Bids for Energy Storage

Please provide your organization's feedback on the ISO's presentation on the *default energy bids for energy storage* topic. Please explain your rationale and include examples if applicable.

The California Large Energy Consumers Association (CLECA) is concerned that the evidence presented indicates that storage is not being used to shift excess solar energy to later in the day for the evening net-load peak, but is rather being used for regulation. This is concerning since the primary source of funding for storage is from Resource Adequacy (RA) contracts which are intended to meet reliability needs and not just provide the ancillary service of regulation. The CPUC Energy Division's modeling effort for RA (particularly its modeling of Effective Load Carrying Capability (ELCC) for solar) and the CAISO's modeling efforts for RA (as indicated at the RA Enhancements meeting this week) seem to suggest that storage creates a diversity benefit for solar by creating such energy shifting. However, if that is not what is actually happening, then it suggests that the modeling assumption is problematic.

To the extent that storage will be added for local RA and there are limited resources in an area, then CLECA believes that the consideration of local market

power is a valid concern. If there is the possibility of market power, the default energy bids should indeed be considered, despite the challenges of doing so.

CLECA also found it interesting that there are such explicit tradeoffs between battery life and the depth of discharge, which means that the sort of deep discharges needed during the evening ramp may not be occurring because of the physical toll on the storage facilities.

Please provide your organization's feedback on DMM's presentation on *default energy bids for energy storage*.

No comment at this time.

Please provide your organization's feedback on SCE's presentation on *resource availability*.

SCE's presentation was very informative, as it indicated that: 1) storage availability is limited by various factors; 2) bidding appears to depend on a forecast of price ranges that informs the economics of charging and discharging; and 3) such a forecast is limited by the inability of Short Term Unit Commitment to optimize resources more than 4.5 hours ahead. SCE also pointed out that charging and discharging decisions based on these factors might be considered economic or physical withholding. More assessment of the possibility of either seems appropriate.

2. NGR State-of-charge paramenter

Please provide your organization's feedback on the ISO's presentation on *the NGR State-of-charge* topic. Please explain your rationale and include examples if applicable.

No comment at this time.

Please provide your organization's feedback on WPTF's presentation on *the NGR State-of-charge* topic.

No comment at this time.

3. Variable Output Demand Response

Please provide your organization's feedback on the ISO's presentation on *the variable output demand response* topic. Please explain your rationale and include examples if applicable.

CLECA certainly agrees that there is variable-output demand response (DR) and that there needs to be some mechanism to be able to come up with a reasonable Net Qualifying Capacity (NQC) for RA planning purposes. There also needs to be a reasonable means of determining what will be available operationally. In the latter case, the regressions from the load impact protocols should be able to gauge output based on such variable conditions as temperature. This is described in the Supply Side Working Group Report submitted to the CPUC on June 28, 2019. Is the CAISO open to a statistical analysis of operational availability based on modeling based on such regressions? This could provide a source of forecast output.

It appears that the CAISO is open to exploring market participation rules for such DR that allows must offer obligation fulfillment by bidding forecast output, but only if ELCC is used to determine the QC for variable-output DR. CLECA is still not convinced that the use of ELCC is appropriate for DR under the current RA program design. Furthermore, without the presentation of what the results of an ELCC value would be, we are in the realm of the strictly theoretical. We note that in the RA Enhancements stakeholder process the CAISO has also brought up the issue of using ELCC for DR and references an E3 report for the Pacific Northwest. This study appears to have considered a generic DR program of 10 calls of up to 4 hours per call. This does not appear to be representative of the diversity of DR program options in California.

The CAISO stated it is considering leveraging industry experts for the purposes of developing an ELCC approach for California variable-output DR. There are key California stakeholders (e.g. CPUC, IOUs, and DR stakeholders) that have experience with ELCC who should be consulted in exploring a potential ELCC approach for DR.

The issue of ELCC for DR has also been brought up in the RA Enhancements initiative. CLECA recommends the issue of using ELCC for DR not be covered in multiple CAISO initiatives. The most appropriate initiative would be RA Enhancements. Therefore, CLECA will provide a more detailed response regarding our concerns in that initiative.

4. Maximum Run Time Parameter for DR

Please provide your organization's feedback on the ISO's presentation on *the maximum run time parameter for DR* topic. Please explain your rationale and include examples if applicable.

The issue of creating parameters for awarding bids to DR resources that capture its characteristics, including maximum run time and one dispatch per day, has been

around for many years without much apparent progress. The options presented by the CAISO for the use of Pmin and Pmax along with start-up and minimum load costs for DR to implement a maximum run time parameter have been discussed before. Yet, no effort has been made to determine how those start-up and minimum load costs would be determined and whether the market monitor would find the methodologies to be acceptable. We recommend that there be a working group meeting to address just how to develop such costs and which parameters the market monitor would be concerned about. Without changes to the CAISO's model, the market is missing out on some of the benefits that DR programs can provide to the system.

Additional comments

Please offer any other feedback your organization would like to provide on the topics discussed during the workshop.