



## Stakeholder Comments Template

### Energy Storage and Distributed Energy Resources Phase 4

This template has been created for submission of stakeholder comments on the Draft Final Proposal and associated May 27 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](mailto:initiativecomments@caiso.com). **Submissions are requested by close of business June 10, 2020.**

Submitted by	Organization	Date Submitted
Raeann Quadro Rquadro@gridwell.com	EDF-Renewables	06/10/2020

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

**1. Default Energy Bid for Storage Resources**

EDF-R has no comment on this item at this time.

**2. End-of-Hour Charge Parameter(s)**

EDF-R is generally supportive of the CAISO's ESDER 4 proposal, except the potential for RA changes as they relate to energy storage end-of-hour state-of-charge (SOC). The end-of-hour SOC proposal in the ESDER 4 paper is significantly changed in the draft final proposal from previous proposals. EDF-R supports CAISO moving ahead with developing SOC functionality in general, but requests the CAISO take a "first do no harm" approach with respect to the proposed SOC RA changes. In the ESDER 4 meeting CAISO indicated that the RA Enhancements initiative would identify changes needed for RA as it relates to end-of-hour SOC.

EDF-R requests that the CAISO siphon the end-of-hour SOC RA changes off onto a development track separate from ESDER 4 and from the current RA enhancements track. The CAISO concerns may turn out to be unwarranted and EDF-R believes the RA changes should only be pursued if and when actual generator behavior indicates a problem.

The CAISO made clear in the ESDER 4 meeting that RA resources that use end-of-hour SOC, may be penalized under RAIM if they reduce their available capacity through the tool during RAIM assessment hours, and that use of this tool during UCAP assessment

hours would lead to a derate with respect to the resources UCAP calculation. This essentially guts the usefulness of being able to use an end-of-hour SOC parameter because it would decrease RA revenues through RAIM penalties and eventually the ability to sell RA capacity under the UCAP model.

Using end-of-hour SOC will be even less prudent for RA resources if the CAISO's UCAP proposal moves forward, as currently proposed using end-of-hour SOC may even limit a supplier's ability to sell future RA. If an RA resource did want to attempt to use end-of-hour SOC, the CAISO's proposal to define supply cushion retroactively using 20% tightest supply cushion hours based on actual conditions makes it almost impossible for RA resources to evaluate or quantify the risk of using end of hour SOC in any given hour – in this new paradigm no hour is safe, all hours are conceivably being tracked and assessed. These RA concerns are not unique to EDF-R nor are they rare.

RA revenue is a critical component of EDF's development model, and EDF's development model is representative of a large portion of energy storage development. If we use Transmission Plan Deliverability status as a proxy for identifying the portion of new generation coming online that have contracted for RA, per the CAISO generator interconnection queue, 99% of MW that declared COD in the last 4 years are under contract for RA. And resources are contracting *now* for the ~2000 MW of energy storage expected to come online in the next few years. The industry does not have a collective path forward for reconciling those existing contracts with new RA policy.

Given the magnitude small RA changes could have on the still-budding and much needed storage fleet, EDF-R is concerned about the pace of CAISO's policy development with respect to battery storage end of day SOC and RA implications. EDF requests that the CAISO act with an abundance of caution on this topic, and requests that the CAISO place on hold SOC RA changes until actual generator behavior indicates a problem.

### 3. **Variable-Output DR**

EDF-R has no comment on this item at this time.

### 4. **Additional comments**

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