California ISO

## 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 |
|---|---|---|
| *Maria Belenky (maria@ohmconnect.com)* | *OhmConnect* | *March 16, 2020* |

**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.

   We appreciated the detailed discussion of the ELCC methodology and the manner in which it could be applied to demand response (DR). E3's presentation provided important clarity regarding the inputs that go into making the calculation, as well as the possible outcomes in terms of a final ELCC value. That said, the results presented in the workshop highlighted several existing and new concerns regarding the application of the ELCC to DR. These are discussed below.

   *The application of one ELCC value to all DR programs can be problematic.* E3's modeling exercise shows substantial differences in the calculated ELCC values across programs: hovering close to 0% for some programs in some local areas and reaching (or even exceeding) 100% in others. This demonstrates that there is significant diversity among DR programs and the application of one ELCC value to all DR would ignore this diversity. Moreover, DR providers with the potential for greater availability could be discouraged from investing in that capability because they know that their capacity will be valued using a methodology that simply looks at one ELCC value for all DR.

*There remains a lack of agreement regarding how to calculate a DR resource's nameplate capacity.* While the presentations provided important clarity regarding the manner in which the ELCC of a DR resource could be calculated, it did not resolve the question of "nameplate" capacity. Because the nameplate value will have a large impact on a resource's final NQC, stakeholder alignment on its methodology is vital.

The conversation at the March 2 workshop provided good food for thought on this topic. We agree with the CAISO that the nameplate value should be the *demonstratable* maximum performance under ideal conditions. However, we disagree with the suggestion that nameplate should equal the LIP ex-ante result modeled under IOU 1-in-2 weather conditions. Those results are more akin to "average" performance under "average" weather conditions and would severely underestimate the maximum potential of a DR resource. One option, under the LIPs, could be to use some combination of the IOU 1-in-10 weather scenario and/or the load drop estimate under a higher percentile (e.g., 70$^{th}$ or 90$^{th}$). Alternatively, one could simply use the maximum demonstrated load drop in a CAISO test or dispatch. This kind of approach would not be purely theoretical—it would be based on actual demonstrated performance—but it would more closely approximate maximum potential performance under ideal conditions.

*The application of ELCC to System but not Local RA could create confusion and parallel methodologies for valuing essentially the same resource.* The CAISO confirmed during the March 2 workshop that the ELCC methodology would only apply to resources providing System RA. This leaves the question of how Local RA resources are to be valued. If the underlying QC valuation methodology remained the same for both types of resources, and the ELCC % was simply applied on top of this QC for resources providing System RA—much like the PRM is added to System but not Local resources—the addition of the ELCC component would not necessarily be a problem. However, as discussed above, nameplate capacity should *not* be determined using the same methodology that would otherwise be used to determine a resource's QC. Therefore, DR providers could be faced with applying two very different methodologies to obtain the NQC of what is essentially the same resource within the same SubLAP: one to determine the nameplate capacity of the resource for the purposes of System RA, and another to determine the QC of the very same resource for Local RA. Depending on the overlap between and the complexities of these two methodologies, the exercise could prove burdensome and confusing.

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.

OhmConnect supports CAISO's proposal to allow variable-output DR resources to bid the amount they are capable of providing under prevailing conditions (both above and below NQC), rather than the NQC, to fulfill their must offer obligations. However, the CAISO has indicated that implementation of this proposal should be tied to the adoption of the ELCC counting methodology. We believe that this proposal is valid and valuable on its own grounds and should be implemented *regardless* of the methodology that the CPUC ultimately adopts for valuing DR resources. The current operating procedures, which require PDRs to bid their exact NQC or take a full outage, are inappropriate for variable resources and may lead to both over- and under-estimations of the energy that a given resource can provide to the grid in any given interval.

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.

   OhmConnect has no comment at this time.

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.

   OhmConnect has no comment at this time.

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.

   OhmConnect has no comment at this time.

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.

   OhmConnect has no comment at this 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.

   OhmConnect has no additional comments at this time.