Stakeholder Comments Template

Energy Storage and Distributed Energy Resources (ESDER) Phase 4

This template has been created for submission of stakeholder comments on the Straw Proposal for ESDER Phase 4. 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 May 17, 2019.

<table>
<thead>
<tr>
<th>Submitted by</th>
<th>Organization</th>
<th>Date Submitted</th>
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<tbody>
<tr>
<td>Grant McDaniel</td>
<td>Wellhead Electric Company</td>
<td>May 17, 2019</td>
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<td><a href="mailto:gmcdaniel@wellhead.com">gmcdaniel@wellhead.com</a></td>
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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 SOC parameter**

Wellhead commends the CAISO for continuing to look for opportunities to improve the modeling and participation of energy storage resources in the CAISO markets. State-of-charge (SOC) management has been a key issue that is currently resulting in sub-optimal use of energy storage resources. Wellhead supports the CAISOs’ efforts to improve the ability for scheduling coordinators to have more control over the real-time state of charge but encourages the CAISO to consider more market-based solutions rather than introducing a physical constraint in the market. Having a more physical as opposed to market-based constraint in the market could still result in sub-optimal economic dispatch of resources and introduce other unintended consequences.

Market based solutions can provide SCs with improved control over SOC while not limiting the flexibility energy storage resources can provide the market. Wellhead is concerned that the current proposal will result in resources essentially becoming a price-taker to ensure the end of hour SOC target is met. Under such a scenario, the market would not only see limited flexibility from that storage resource, but the resource could also be foregoing a more optimal economic dispatch. Wellhead also seeks clarification on the impact to the must offer obligation. For example, would RAAIM penalties be assessed, or potentially a future UCAP value be impacted, if a flexible RA resource with economic offers that, due to the SOC target constraint, become a self-schedule?
2. **Bidding requirements for energy storage resources**
   No comment

3. **DR operational characteristics**
   a. Please provide comments on the CAISO’s three options.
      No comment

4. **Variable output DR**
   a. CAISO requests additional detail and reasoning from stakeholders who believe a more appropriate method exists for determining QC than applying an ELCC methodology.
   b. CAISO requests stakeholder feedback on controls needed to ensure that forecasts accurately reflect a resource’s capability.
      No comment.

5. **Non-24x7 settlement of behind the meter NGR**
   a. As a behind the meter resource under the non-generator resource model, any wholesale market activity will affect the load forecast. How will load serving entities account for changes to their load forecast and scheduling due to real time market participation of behind the meter resources?
   b. How would a utility distribution company prevent settling a resource at the retail rate when the behind-the-meter device is participating in the wholesale market?
   c. If a behind-the-meter resource is settled only for wholesale market activity, what would prevent a resource from charging at a wholesale rate and discharging to provide retail or non-wholesale services? How would this accounting work?
      No comment.

6. **Additional comments**
   Please offer any other feedback your organization would like to provide from the topics discussed during the working group meeting.
      Thank you for the consideration of our comments.