Stakeholder Comments Template

Submitted by	Company	Date Submitted
Anja Gilbert	PG&E	7/6/2018

The CAISO requests your comments to the ESDER 3 proposal:

1. New bidding and real-time (RT) dispatch options for demand response (DR)

   Comments:

   PG&E recommends the CAISO update the Draft Final Proposal to clarify how these RT dispatch options for DR will align with the proposals in the Day Ahead Market Enhancements Initiative.

2. Removal of the single load serving entity (LSE) aggregation requirement and the need for application of a default load adjustment (DLA)

   Comments: None.

3. PDR-Load Shift Resource

   Comments:

   For the Proxy Demand Response – Load Shift Resource (PDR-LSR) proposal, PG&E recommends CAISO:
   A. Resolve a scenario in which an entity may respond to a PDR-LSR dispatch with a registered battery to increase load while at the same time, an unregistered battery decreases onsite load, resulting in no net impact to the grid.
   B. Institute a buffer period before and after PDR-LSR events to minimize bias in baseline calculations; PG&E suggests a two-hour period before and after the event.
   C. Capture the full response of the battery in the baseline calculations.

   Further clarification of these issues and recommendations are provided below:

   A. Impact on Net Load
   CAISO should ensure any product developed has a net impact on the grid.

   Scenario: CAISO has stated that every behind-the-meter (BTM) battery would need to register as PDR-LSR and would be incentivized to do so based on payments. However, PG&E questions if this incentive would be sufficient. For example, if we have Resource A

(PDR-LSR with a registered battery) and Resource B (premise + an un registered battery not participating in the CAISO market) there is a risk that a registered PDR – LSR for load increase could be offset by an unregistered battery at the premise which would be incentivized to curtail by an equal amount. The incentive to the entity to increase one battery and decrease another battery would be a.) to avoid demand charges and b.) to be paid for increasing load in response to a PDR-LSR award. The result of this action (i.e., responding to a PDR-LSR dispatch to increase load with Resource A while using the unregistered battery at Resource B to decrease load) would be that there would be no net impact to overall grid conditions even though a payment has occurred to increase load at a given time.

B. Bias in Baselines:

In selecting 10 non-event like days for the PDR-LSR baseline calculation, CAISO's proposal counts a day as a non-event like day as long as an event is not dispatched during the same 15-min or 5-min interval as the event, regardless of whether an event is dispatched immediately before the interval on the "non-event like day". For example, if a PDR-LSR event is dispatched for 2:00 – 2:15 pm, the proposed baseline averages the load during 2:00 – 2:15 pm from the last 10 weekdays where no curtailment or consumption event was dispatched for the interval.

Issue: A bias can be introduced if adjacent intervals are not taken into account when selecting non-event like days, since storage is supposed to be energy-neutral (i.e. a discharge is possible only if the battery has previously charged, and vice versa) and the load of an interval may be affected by the load of its adjacent intervals.

Example: Consider a scenario where the typical use of the storage is at 0 MW (neither charging nor discharging) at 2:00 – 2:15 pm. Suppose the battery responded to a curtailment event at 1:30 – 2:00 pm yesterday by discharging; afterwards, it charged itself 2:00 – 3:00 pm. That is, the load for 2:00 – 2:15 pm is no longer representative of the typical use. However, the proposed baseline would still consider yesterday as a non-event like day, since no event was called during 2:00 – 2:15 pm.

Recommendation: A non-event like day should not have any event (curtailment or consumption) a buffer before and after the interval. PG&E recommends the buffer be two hours before or two hours after the event interval. Using the example above, none of the 10 non-event like days can have an event from 12:00 pm – 4:15 pm.

While the current baseline calculation for PDR—where an entire day is removed as long as it contains an event—could be a purist's approach to minimizing the potential bias, another concern may arise, which is running out of non-event like days especially with frequent dispatch. To strike a balance, PG&E believes a 2-hour buffer before and a 2-hour buffer after the event interval should be reasonable.

C. Battery Performance

Issue: CAISO's current baselines do not capture the full response of the battery moving from curtailment to load increase. CAISO should update their baseline calculations to capture the load change that the battery is providing.

4. <u>Measurement of behind-the-meter electric vehicle supply equipment (EVSE) load curtailment</u>

Comments:

In response to SCE's concern that an EVSE providing load drop would move EVs from the EVSE to the premise (resulting in a payment without a net response that benefits the grid) PG&E supports CAISO's verbal proposal that a EVSE's metering plan would include an attestation or self-certification that the EVSE would not engage in such behavior. PG&E recommends the CAISO provide such an attestation for stakeholders to review. In addition, this situation could lead to another scenario of how the CAISO should ensure any product developed has a net impact on the grid, as discussed above in Section 3 part A (Impact on Net Load).

5. <u>Other comments</u>

Please provide any additional comments not associated with the topics above.

Comments:

It is unclear how CAISO plans to implement the most recent PDR-LSR proposal of associating an individual location with multiple resource IDs. As a result, PG&E cannot assess whether this can be supported by utility systems or, if not, if/what changes would be necessary. PG&E requests that the CAISO include implementation details for how individual locations will be associated with multiple resource registrations by CAISO systems.