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SDG&E appreciates the opportunity to comment on the CAISO’s ESDER 3 issue paper. SDG&E provides the following comments to assist the CAISO in shaping the scope of the initiative.

**Demand Response Issues**

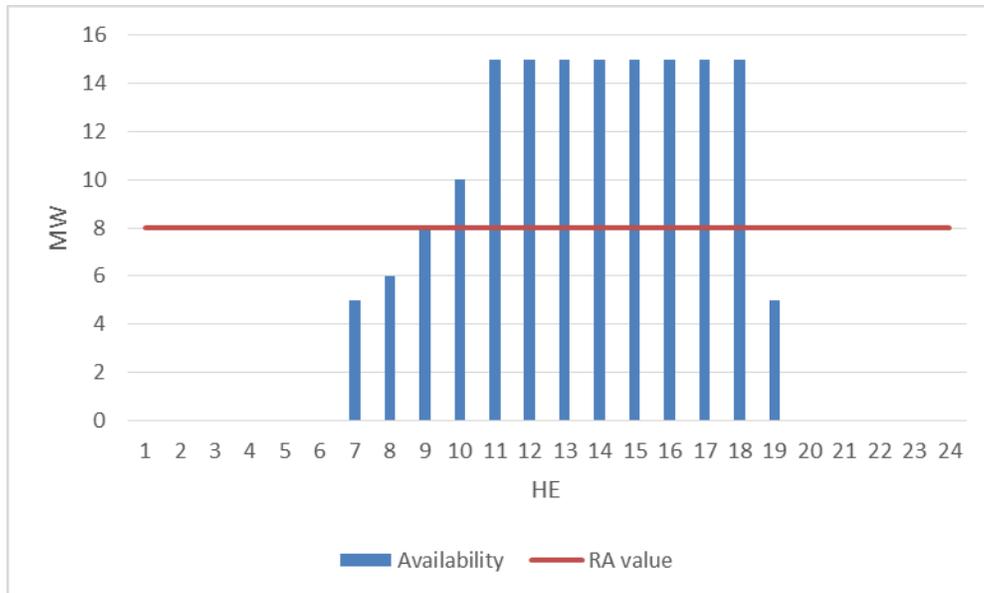
The CAISO notes that certain modeling limitations prevent PDRs from being dispatched appropriately. Specifically, due to the Pmin, min load and start-up costs being zero, the resources have zero commitment costs and are being dispatched in the CAISO’s RUC process. The CAISO is considering the applicability of commitment-based constraints for resources with a 0 MW Pmin. SDG&E agrees and believes the CAISO should review whether PDRs should have the option to receive default non-zero commitment cost such that the CAISO does not dispatch PDRs first in the RUC process. Should the definition of commitment costs be broadened to include intangible costs for PDRs?

The CAISO also identified that its market optimization software is not accurately recognizing the max and min run-time constraints. The CAISO’s alternative unfortunately does not seem to resolve the fundamental problem within the market optimization software. SDG&E recommends that the CAISO provide details of what steps are necessary for the CAISO to fix the market optimization software. SDG&E also recommends the CAISO provide information of how its import/export bidding option might affect the solution or the CAISO’s alternative. It appears that this initiative and the CAISO-CPUC joint initiatives are taking separate tracks at this moment. It would be beneficial to provide market participants with some insight as to when the tracks would cross or merge.

**Weather-sensitive demand response**

SDG&E believes stakeholders’ concerns for weather-sensitive demand response is not directly tied to the net qualifying capacity methodology of the PDR. Rather, the CAISO’s existing bidding processes disadvantages PDRs when they are partially unavailable to meeting the MOO due to the nature of the program regardless of weather sensitivity.

The existing MOO for all resources including PDRs is 24 hours of each day. However, due to the nature of the program, the PDR, including non-weather sensitive programs, may not be available to provide its monthly RA value for every hour of the day, including the program hours. The following example illustrates the availability of such a program.



The non-weather sensitive PDR has a maximum curtailment of 15 MWs, an NQC of 8 MWs and an hourly variable availability as it begins operations. The CAISO’s system does not allow this resource to bid in below the RA value. If the SC bids in 5 MW for HE 19, the CAISO’s system would adjust the bid to equal the 8 MWs RA value because that is the MOO for the resource. Providing the 15-minute bidding option would not prevent the PDR from having to meet its MOO every hour. If the CAISO bids and dispatches 8 MWs but the resource is only capable of 5 MWs, then the CAISO would have 3 MWs of energy it would need to dispatch from other resources on the grid. This would increase costs for ratepayers because the CAISO’s system is not aligned with the operational capabilities of the resource it is dispatching.

#### Outage card

Using the same example as above, PDRs are not allowed to submit partial derates for its resource. This is to prevent the resource from adjusting its settlement and avoid certain penalties. SDG&E understands this limitation but requests the CAISO to revisit this issue and consider solutions which would allow the SC to submit the accurate hourly availability to the CAISO.

#### RAAIM charges

Still using the same example above, a PDR resource may register as a use-limited resource. This would prevent the CAISO system from submitting a bid that matches the 8 MWs RA quantity every hour. However, if the business hours do not overlap with the RAAIM assessment hours, the PDR would be penalized for its non-availability. Variable energy resources do not have such a problem<sup>1</sup>. SDG&E believes that the CAISO should consider a different RAAIM assessment methodology similar to the one available to VERs during SCP. This would apply to all PDRs regardless of weather sensitivity.

<sup>1</sup> VERs are exempt from RAAIM charges for generic RA. However, VERs had a different RAAIM assessment prior to April 2017 when the CAISO implemented standard capacity product availability mechanism.

### **Resource design constraints**

SDG&E recommends the CAISO collaborate with the CPUC to ensure any changes are vetted by the CPUC and approved. CPUC Decision 14-06-050 has limitations for PDRs such as aggregation occurring within the same sub-lap.

### **Demand response aggregation rules**

SDG&E does not support removing the DLA settlement mechanism at this time. The CAISO should consider lowering the minimum PDR size requirement instead of allowing multiple LSEs' customers per PDR.

### **RDRR economic buy-back of day-ahead awards**

SDG&E agrees with the CAISO and believes that RDRRs should not be allowed to be bought back in real-time. If the CAISO believes that RDRRs were dispatched in lieu of another resource day-ahead and was not needed in real-time, the CAISO should analyze the reasons for such a dispatch. As the CAISO notes, RDRR is used in real-time and has no offer obligation day ahead. Why did RDRR offer and CAISO dispatch RDRR day-ahead? Should the CAISO limit RDRR dispatches to real-time only?

### **EVSE load curtailment**

SDG&E supports the concept of the metered generator output for EV charging. Currently, the three IOUs have EVSE sub-meter pilot programs approved by the CPUC. This concept at the CAISO would allow additional participation and load management for future EVSE sub-meter participation. SDG&E requests the CAISO discuss technical requirements of sub-metering systems necessary for EVSEs in future papers and meetings.

### **Load shift product**

SDG&E supports the consideration of BTM storage under a DR participation model. Such products could be beneficial to absorb excess generation when the grid must curtail renewable resources. However, the CAISO should ensure that such products do not increase the need for generation output beyond the production of renewable resources. Such incremental generation output would come from non-renewable dispatchable resources. SDG&E also encourages the CAISO to work with the CPUC as CPUC Decision 14-06-050 appears to prohibit such products from being "aggregated."

### **Multiple-Use Applications**

SDG&E requests additional information of the concerns raised by stakeholders for which the CAISO would consider in ESDER 3. What is the benefit to grid reliability and the overall market for allowing NGRs to opt out of the CAISO metering and settlement at intervals of the NGR's choosing? How does a micro-grid owner ensure it can deliver energy to the CAISO as well as serve the micro-grid's designated load? What priority does the CAISO have compared to the micro-grid owner over the energy produced by the resources?

## **Non-Generator Resources**

SDG&E supports the inclusion of additional costs and non-physical limitations in the NGR model. Accurate costs should be reflected in the model so that resources are dispatched properly and are operated as designed.

SDG&E supports the topics proposed by the CAISO for better market optimization of the NGR. The CAISO should also review how the new Masterfile template's market ramp rate column, being implemented as part of CCE 3, would impact the regulation optimization rather than using the full capability of the resource.