Stakeholder Comments Template

Submitted by	Company	Date Submitted
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SDG&E appreciates the opportunity to comment on the alternate performance evaluation methodology proposal(s) discussed during the October 27, 2015 Energy Storage and Distributed Energy Resources (ESDER) working group call. SDG&E believes that demand side resources utilizing advanced technologies to frequently participate in the CAISO's wholesale markets raises novel and complex issues that likely cannot be completely or adequately resolved within the existing Proxy Demand Resource (PDR) framework. SDG&E shares the view expressed by Olivine and CLECA that in the long term, accurately valuing the contributions of resources that provide services – perhaps simultaneously – on both sides of the jurisdictional line separating wholesale and retail markets will likely require creating a new framework entirely; a framework that thoughtfully identifies and separates retail use from wholesale services, and that addresses and balances the load-modifying impacts of frequent discharges from simple supply-side market activity.

In the near-term, however, SDG&E recognizes the need to evolve the PDR framework to enable frequent participation from customers with advanced technologies, like energy storage, and to verify the incremental value that frequent participation provides to the wholesale market. However, this near-term evolution must also address SDG&E's and other parties' serious concerns about the need to separate retail and wholesale activities. Through this working group effort, SDG&E believes we are poised to achieve these near-term goals, and sincerely appreciates the dialogue and collaboration that occurred throughout this process.

This process began with a proposal to expand the performance evaluation methodologies for PDR resources to include a Metered Generator Output (MGO) option. Unlike the CAISO's existing performance evaluation metrics for PDRs that employ a baseline to determine the customer's typical consumption in a given interval, the MGO simply meters the output of devices (such as a battery or generator) at a customer's premise and uses this metered quantity to determine a PDR's performance for wholesale settlement purposes. SDG&E expressed serious concerns about the MGO – concerns the CAISO ultimately shared –

centered on the MGO's inability to identify or distinguish a customer's typical behavior from his or her purported wholesale contributions. For example, a customer may predictably and consistently discharge its battery in a certain interval to manage retail demand charge exposure or time of use rates. While the baseline performance metrics would identify this typical behavior, and subtract it from wholesale payments, the MGO would not. The MGO simply assumes *all* discharge provides direct, proportional and incremental wholesale benefit, when in fact the customer's typical behavior (i.e., typical discharge patterns in the given interval) may reveal that there is no incremental wholesale benefit whatsoever. In short, SDG&E is concerned that MGO enables customers to bid their typical storage discharge into the market, and receive what amounts to a windfall at wholesale.

Adequately addressing this issue in a manner that treats all PDR providers – those with storage and those without – equally is SDG&E's singular focus in this stakeholder process. In its presentation during the October 12, 2015 stakeholder meeting, the CAISO offered two possible limitations on the MGO that attempted to remove or adjust metered output that was used for retail purposes. Option 1 proposed to establish a baseline for MGO resources that looked back 45 days to identify the resource's typical activity in 10 comparable non-dispatch intervals. The second option would employ a capacity set-aside that reserved a portion of the resource for retail use, and allowed the rest to be used at wholesale. While not perfect, SDG&E indicated that both options were viable and worth exploring further.

In response to the CAISO's proposed limitations on MGO, Stem, AMS, and Solar City (the Companies) circulated an alternative proposal on October 21, 2015. For resources that are not dispatched frequently in the market, the Companies' proposal commits to establishing a "typical-usage level" for storage-backed PDRs based on electric output using (G) metered quantities during non-dispatch days, selected by conducting a look back of comparable, non-dispatch days similar to the CAISO's existing 10-in-10 in 45 baseline.[1] However, if 10 non-event days cannot be found within a look-back window (i.e., the resource is frequently dispatched in the market), then the resource is deemed to be a full-time market participant and GTYPICAL = 0.

SDG&E does not support this alternative proposal. The Companies' commitment to hold resources with *infrequent* dispatches to a baseline logically acknowledges that typical retail activity must be identified and separated from wholesale activity. This separation is required because the *only* value to the wholesale grid is incremental discharge above what was typically provided by the customer in that interval. However, the proposal then suggests that we ignore this logic for resources with *frequent* dispatches. SDG&E fails to see the distinction for treating

[1] SDG&E notes that the Companies did not clearly specify the length of the "look back" period, only stating that it would be "similar" to the 45 day lookback in the CAISO's existing 10 in 10 baseline methodology.

frequently dispatched resources differently from infrequently dispatched resources. If the CAISO receives no incremental value from the retail portion of the customer's typical discharge in infrequent use scenario, then it also receives no incremental value from the retail portion of the customer's typical discharge in the frequent use scenario. The Companies' proposed solution does not resolve SDG&E's and the CAISO's primary concern with MGO, it simply proposes to ignore it. SDG&E is also unpersuaded by the argument that this outcome is justified because frequently dispatched resources are "full-time market participants." If the resource is simultaneously discharging in the market interval to reduce its retail bill, it is by definition *not* a full time market participant.

Near the end of the October 27, 2015 working group call, to more directly address the retail/wholesale issue, the CAISO proposed to refine its "baseline" option from the October 12, 2015 meeting. That refined proposal, as SDG&E understood from the call, would tie PDR resources utilizing MGO to a baseline that looked back 45 days to identify the resource's typical activity in 10 comparable non-dispatch intervals. If 10 non-dispatch intervals could not be found, the CAISO would then look for a some minimum number of non-dispatch intervals – in this case 5 – and average those 5 minimum non-dispatch intervals to establish the customer's typical, non-wholesale activity, and subtract that typical activity from any wholesale settlement. If five non-dispatch days cannot be found, the G quantity defaults to 0. This approach is similar to how the CAISO currently treats PDR resources subject to the existing PDR baselines.

Conceptually, the CAISO's approach suffers from the same flaw as the Companies' in that it ignores retail activity for frequently discharged resources. However, in looking for retail activity in the minimum number of days before defaulting to 0, the CAISO's approach is more palatable. Further, because this proposed approach closely mirrors how the CAISO treats PDR resources subject to the existing PDR baselines, it creates symmetry and consistency between how the CAISO settles PDR resources with a single whole premises meter, and how it proposes to settle PDR resources with more granular device-level metering. As stated above, in the near-term, SDG&E recognizes the need to evolve the PDR framework to enable frequent participation from customers with advanced technologies, like energy storage, and to verify the incremental value that frequent participation provides to the wholesale market. The CAISO's modified approach might be the best way to achieve those near-term goals. SDG&E looks forward to reviewing and commenting on the CAISO's revised approach in the final draft proposal.

While this approach may address near-term issues, SDG&E continues to believe that accurately valuing the contributions of resources that provide services – perhaps simultaneously – on both sides of jurisdictional line separating wholesale and retail markets will likely require creating a new framework entirely; a framework that thoughtfully identifies and separates retail use from wholesale services, and that addresses and balances the load modifying impacts of frequent discharges from simple supply-side market activity. To encourage work towards this long-term framework, SDG&E suggests the CAISO consider imposing a sunset date for any newly adopted performance evaluation methodologies, so that their practical efficacy can be properly assessed and, if necessary, modified by stakeholders and the CAISO.