Energy Storage and Distributed Energy Resources Phase 3 Comments on January 16 Workshop

Submitted by	Company	Date Submitted
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PG&E appreciates the CAISO's and stakeholders' extended effort to clarify and explain the need underlying the many topics that have been proposed for inclusion in the scope of this initiative.

At the January 16 stakeholder workshop, CAISO set out their view of the relative priority of issues and provided a productive forum where the issues and their priority were discussed. The workshop illuminated several aspects of many of the proposed topics and, we believe, produced a level of consensus around the inclusion of several of the topics in the policy development stage of this initiative.

PG&E supports CAISO's recommendation to keep in scope for this initiative the following Demand Response (D)R topics: DR modeling limitations, variable/weather sensitive DR, single load serving entity requirement/potential default load adjustment modification, and the development of a load shift product. For the benefit of the stakeholder process, we offer the following explanation for this support:

DR Modeling: PG&E supports efforts related to considering commitment-based constrains to deal with resources that have a zero-commitment cost—like DR. We also support enhancements to min/max run time constraints, which recognize DR's limitations. We agree that proposals, developed in this initiative, will be useful for the CAISO's Commitment Cost Enhancements initiative.

Weather Sensitive DR: As a DR resource is often comprised of a variety of technologies, its PMAX can vary under different weather conditions. We support providing bidding and modeling flexibility for DR resources' PMAX—similar to what was developed for variable energy resources—to reflect weather sensitive DR as a reasonable recognition of operational constraints. This discussion should be coordinated with the CPUC's RA proceeding and discuss impacts related to the resources must offer obligation and RAAIM penalties.

DR Resource Design Constrains / DR Aggregation Rules: With the anticipated increased numbers of LSEs and the requirement that Investor-owned utilities cease offering DR programs when a similar DR program is offered by a CCA, there are new challenges to

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meeting minimum DR program size requirements. As the one LSE/DRP rule is tied to the implementation of the default load adjustment, PG&E supports the evaluation of both items in this initiative.

Load Shift Product: As CAISO develops a load shift product, PG&E understands it will start with storage but recommends that any future product be technology neutral. PG&E also looks forward to working with CAISO in the CPUC's Load Shift Working Group to develop possible elements of new models.

PG&E agrees with the CAISO that PDR/RDRR hybrid resources and additional MUA use cases should not be in scope for the current initiative. We also agree that behind-the-meter EV load curtailment should be out of scope; but if CAISO includes this topic, it should do so in a technology-neutral way.

PG&E believes that several of the NGR-related topics may be resolved through operational changes by market participants under existing rules—rather than through CAISO tariff and market platform changes—and so do not warrant inclusion in the initiative at this time. Analysis of PG&E's experience in managing throughput limitations through bidding has indicated that there may not be a compelling need to include throughput as a model parameter. PG&E supports deprioritizing the addition of throughput limitations to the NGR market model at this time. PG&E welcomes other participants further testing NGR to understand what enhancements may be needed to the NGR model. As described at the workshop, our experience offering storage resources into the CAISO market has indicated that there may be several ways to constrain wholesale market participation in order to satisfy other operating requirements or customer needs. Our recent experience suggests that it is practicable to manage the state of charge for a NGR battery resource independently, after gaining sufficient familiarity with operating the resource in the market, or by allowing CAISO to manage a battery's state of charge, e.g., through the regulation energy management model.

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